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INTRODUCTION.

This REVIEW is based on reports for April, 1892, from 2,911 regular and voluntary observers. These reports are classified as follows: 158 reports from Weather Bureau stations; 47 reports from United States Army post surgeons; 1,902 monthly reports from state weather service and voluntary observers; 31 reports from Canadian stations; 219 reports through the Cen-

tral Pacific Railway Company; 554 marine reports through the co-operation of the Hydrographic Office, Navy Department; marine reports through the "New York Herald Weather Service;" monthly reports from local weather services established in all states and territories, except Idaho; and international simultaneous observations. Trustworthy newspaper extracts and special reports have also been used.

CHARACTERISTICS OF THE WEATHER FOR APRIL, 1892.

Cool and wet weather delayed farming operations in the Pacific coast states, the Dakotas, Nebraska, parts of Kansas and Indian Territory, and in Minnesota, Iowa, Missouri, and Louisiana. In Florida, southern and western Texas, parts of New Mexico and Oklahoma Territory, and from eastern New York over central and northern New England the month was unusually warm and dry. In Florida small fruits and oranges were injured by drought. Crops were seriously affected by drought in Texas. Owing to a scarcity of water and grass a great loss of live stock occurred on the ranges of southern and western Texas and New Mexico.

TEMPERATURE.

The temperature was lower than usual, except in Florida, Texas, the eastern lake region, and New England. The most marked departure below the normal was noted from the middle and north Pacific coasts to the Dakotas, where it was 4° to 6°. On the 10th and 11th frost injured fruit and tender vegetation from Tennessee to the Carolina coast, and on the 16th frost was destructive to vegetation in the Carolinas and Georgia.

PRECIPITATION.

The monthly precipitation was in excess of the average amount for April in the central valleys and along the north Pacific coast, and was deficient in New England and southeastern and southwestern districts. In the first decade of the month heavy snow fell from Colorado and Wyoming to Iowa, the snowfall being notably heavy in the Black Hills region of South Dakota and Wyoming, where a great loss of live stock was reported.

STORMS.

Destructive local storms were noted on five to seven dates from Texas to Kansas and Illinois. Unusually severe wind and local storms occurred on the 1st from the middle and southeast slopes of the Rocky Mountains to the western lake

region; a tornado was reported in Harvey county, Kans.; and six persons were killed in Chicago, Ill. Tornadoes occurred in Oklahoma, Kansas, and Missouri on the 3d; in Arkansas and Illinois on the 4th; in New York on the 5th; and in Arkansas and Louisiana on the 20th.

FLOODS.

In the early part of the month streams in the lower Ohio valley, Tennessee, Mississippi, Alabama, and New York rose rapidly. Floods in the Tennessee River and tributaries caused great damage in Tennessee and northern Alabama. The Yalabusha River was reported the highest ever known at Grenada, Miss. High water caused great damage in northern Mississippi. Large areas were submerged in Alabama by the overflow of the Coosa River. In east-central Mississippi great destruction to life and property resulted from the overflow of the Tombigbee River and tributaries. The Red River of the North overflowed its banks at Saint Vincent, Minn., on the 10th. On the 6th the Mississippi River reached the danger-line at Cairo, Ill. On the 14th the danger-line was reached at Cairo, Ill. On the 14th the danger-line was reached at Memphis, Tenn., and Vicksburg, Miss. At New Orleans, La., the danger-line was reached on the 5th. At the close of the month the Mississippi River was above the danger-line from Cairo to the Gulf. The river was falling slowly at Cairo, and rising south of Memphis. No important breaks had occurred in the levees.

AURORAS.

The more notable auroral displays of the month were noted from New England to Michigan on the 23d; from Maine to Washington, and in the Ohio valley, on the 25th; from Maine to Montana, and from the Ohio valley to the middle slope of the Rocky Mountains, on the 26th; and at scattered points from Maine to Washington on the 30th.

ATMOSPHERIC PRESSURE (expressed in inches and hundredths).

The distribution of mean atmospheric pressure for April, 1892, as determined from observations taken daily at 8 a. m. and 8 p. m. (75th meridian time), is shown on Chart II by isobars.

In April the mean pressure is usually highest on the Pacific coast between the 37th and 46th parallels, where it is above 30.05, and it is above 30.00 from Manitoba to the Lake Superior region and over districts east of the Mississippi and south of the

Ohio rivers. The mean pressure is usually lowest over the Gulf of Saint Lawrence, where it is below 29.90, and it is below 29.95 on the southeast slope of the Rocky Mountains, over the west part of the southern plateau region, and in the British Possessions north of Montana and Washington. There is usually a decrease of pressure, except along the north Pacific coast, and over Maine and the Canadian Maritime Provinces, where the normal pressure is slightly higher than for March. In the United States the most marked decrease of pressure usually occurs in the middle Missouri valley and on the northeast slope of the Rocky Mountains, where it is more than .10. In British America west of Hudson Bay the decrease of pressure probably exceeds .20.

In April, 1892, the mean pressure was highest along the south Atlantic coast, where it was above 30.15, and it was above 30.10 in Manitoba and along the middle Pacific coast. The mean pressure was lowest over the Gulf of Saint Lawrence, where it was below 29.80, and it was below 29.90 over the west part of the southern plateau region.

A comparison of the pressure chart for April, 1892, with that of the preceding month shows a decrease of pressure save in the Atlantic and east Gulf states, along the Pacific coast, and over the west parts of the middle and northern plateau regions. The most marked decrease of pressure was noted over Kansas and eastern Nebraska, where it was more than .15, and the greatest increase occurred at stations on the New England and North Carolina coasts and in the Sacramento Valley, California, where it was .10.

The mean pressure was above the normal except over the Canadian Maritime Provinces, on the north Pacific coast, and in an area extending from South Dakota and Wyoming to Texas and the southern plateau region. The most marked departure below the normal pressure was reported at Gulf of Saint Lawrence stations, where it was more than .05, and the greatest departure above the normal pressure was noted on the North Carolina coast, where it exceeded .15.

HIGH AND LOW AREAS.

The paths of areas of high and low pressure over the United States and Canada during April, 1892, are shown on Charts IV and I, respectively, and some of the prominent characteristics of the areas are given in the table at the end of this chapter.

HIGH AREAS.

Six high areas appeared, the average number traced for April during the last 17 years being 8. Of the high areas traced 5 advanced from the Pacific coast, of which number 2 traversed the continent and last appeared off the south Atlantic coast, 1 disappeared in the Hudson Bay region, 1 over the middle plateau region, and 1 over the Ohio Valley. One high area advanced from the British Northwest Territory and disappeared off the middle Atlantic coast. The Pacific coast high areas appeared to move northward off the coast, and passed eastward over the Saskatchewan Valley, thence southeastward over the central valleys, where, with one exception, they recurved northeastward to the Lake region, and moved thence southeastward toward Bermuda. The average velocity of the high areas, 23 miles per hour, was somewhat less than the average rate of advance of high areas for April. The following is a description of the high areas traced:

I and II.—Number I appeared on the Oregon coast the morning of the 4th, with pressure above 30.30, and moved southeastward over the middle plateau region by the 5th, with pressure above 30.40. During the 6th this high area apparently shifted position to the westward, and, moving northward over the Pacific coast states, appeared in Alberta the morning of the 7th as number II. The morning of the 4th the temperature was generally low from the Rocky Mountains to the Pacific coast; freezing weather prevailed over the middle and northern plateau regions and in the Northwest; and heavy frost was noted at Eureka, Cal. The morning of the 5th the temperature had fallen more than 20° in the lower Missouri valley, and heavy frost occurred in western Kansas.

Number II advanced from Alberta to Nebraska during the 7th and 8th, with pressure above 30.60 the morning of the 8th, passed northward over the valley of the Red River of the North during the 9th, and moving thence slowly eastward remained nearly stationary north of Lake Superior until the 13th, when it apparently shifted position westward and united with number III.

On the 7th the temperature fell more than 20° in the Northwest. During the 8th the cool wave extended over the middle Mississippi and Ohio valleys, and reached the Gulf and south Atlantic states on the 9th, with heavy frost in parts of western Kansas, Oklahoma Territory, and western North Carolina. On the 10th the temperature fell below freezing in parts of Tennessee, and heavy frost was reported thence to Virginia, the Carolinas, and northern Georgia. The weather continued unusually cold east of the Rocky Mountains during the 11th, the temperature being 10° to 15° below the normal over a great part of that region, and heavy frost occurred in North Carolina and Virginia.

III.—Apparently moved northward off the Pacific coast and the evening of the 11th was central on the Washington coast, with pressure above 30.20. Advancing to Alberta during the 11th, the high area reached the Red River of the North Valley on the 13th, passed thence southward to the Gulf of Mexico by the 15th, and thence off the south Atlantic coast during the 16th, with highest pressure, 30.48, over Nebraska at the morning report of the 14th. On that date the temperature was below freezing on the eastern slope of the Rocky Mountains north of Texas, and the temperature fell 10° to 20° from Texas to Pennsylvania. On the 15th the temperature fell 20° from Alabama to North Carolina, and on the 16th frost injured tender vegetation in the middle and east Gulf and south Atlantic states.

IV.—Apparently moved northward off the Pacific coast, and the evening of the 17th was central off the Oregon coast with pressure above 30.20. Passing slowly northward along the north Pacific coast during the 18th and 19th, the area moved thence to the region north of Montana by the morning of the 20th, with pressure above 30.60, thence southeastward to Arkansas by the 23d, and during the 24th moved northward over the Ohio Valley and apparently united with high area V.

On the 18th frost nipped vines near Fresno City, Cal. A decided fall in temperature occurred on the middle-eastern and northeast slopes of the Rocky Mountains, the 12-hour temperature fall being more than 20° on the middle-eastern slope. On the 19th freezing weather was reported at Olympia, Wash., and heavy frost damaged fruit in that section. On the 21st the temperature fell below freezing in parts of western Kansas, and heavy frost injured fruit and tender vegetation about Dodge City, Kans.

V.—Appeared over Manitoba the morning of the 23d, with pressure above 30.30, passed thence slowly eastward to the region north of Lake Superior, where it remained nearly stationary until the 26th, with pressure rising above 30.60, after which it moved southeastward off the middle Atlantic coast during the 27th, attended prior to the 26th by a moderate cold wave over the middle Atlantic and New England states.

VI.—Appeared off the middle Pacific coast and the morning of the 26th was central off the north California coast, with pressure above 30.20. By the 27th the center had advanced to the region north of Montana, with pressure above 30.40, and passed thence to the lower Missouri valley by the morning of the 29th, to the Lake Superior region during the 29th, and to a position off the North Carolina coast by the close of the month, with pressure 30.50 at Port Huron, Mich., at the evening report of the 30th. This high area was attended by a severe cold wave in the Northwest, the lowest temperature for the season ever recorded at Fort Assinaboine, Mont., 12 years' record, being noted the morning of the 18th, when it fell to 20°. This cold wave was not severely felt in the central valleys and the Atlantic coast states.

LOW AREAS.

The average velocity of low areas for April is 26 miles per hour, 11 miles per hour less than the average velocity of winter low areas. A principal track of April low areas is from Wyoming almost due eastward to New England and south of Nova Scotia, and thence east-northeast over the Grand Banks, and less frequented tracks are traced from the Saskatchewan Valley to the Lake region, and from the southern plateau region and the south Atlantic coast. An average of one low area per month advances from the Pacific coast and traverses the continent in April.

Eight low areas appeared in April, 1892, the average number traced for the corresponding month of the last 19 years being 10. Of the low areas traced for the current month 5 advanced from the Pacific coast north of the 45th parallel, one first appeared in the upper Saskatchewan valley, one, a continuation of low area XIII for March, occupied Nebraska at the opening of the month, and one advanced from the west part of the Gulf of Mexico. The low areas from the Pacific moved southeast over the central valleys, and thence northeastward, and 4 of the low areas traversed the continent. The low area from the Saskatchewan Valley disappeared in the Hudson Bay region. Low area I, a continuation of number XIII for March, and the low area from the Gulf of Mexico advanced to the Gulf of Saint Lawrence. The following is a description of the low areas traced:

I.—Was a continuation of low area XIII for March, 1892, and at the morning report of the 1st occupied Nebraska, with pressure 29.00, a decrease of central pressure of .20 to .30 in 12 hours. At this time the barometric gradient was very marked to the westward of the center, being .60 inch in less than 200 statute miles; to the eastward the gradient was somewhat less marked. During the period 8 a. m. to 8 p. m. of the 1st the pressure decreased .40 to .50 inch over the west Lake Superior region, and the center moved in that direction, reaching the region north of Lake Superior on the 2d, and passed thence rapidly eastward to the Gulf of Saint Lawrence by the 3d, with a marked loss of energy after the 1st.

On the 1st this low area was attended by heavy gales and destructive local storms from Nebraska, Kansas, and Texas to the upper Mississippi valley. The conditions which attended the development of tornadoes and thunderstorms from Nebraska to Texas the night of March 31st extended over the middle Mississippi, lower Missouri, and lower Ohio valleys. Wind velocities of 50 to 70 miles per hour and destructive thunderstorms were reported from Texas to Iowa, and tornadoes occurred in Kansas and Illinois.

On the 2d heavy southwest winds prevailed over the south-central and southwestern lake region, a velocity of 57 miles per hour being noted at Port Huron, Mich., and 54 miles per hour was reached at Detroit, Mich., and Chicago, Ill. The afternoon and evening of the 3d destructive thunder and hail storms occurred in West Virginia and southwestern Pennsylvania. Owing to the marked barometric gradient the rain area extended less than 600 miles east of the storm center during the 1st. On the 2d the gradient was less marked and the rain area extended to the Atlantic coast.

II.—On the 1st the pressure was low on the north Pacific coast and during the 2d this low area advanced to the region north of western Montana, with pressure below 29.50, rain in the Pacific coast states, and snow over the west part of the middle plateau region. During the 3d the center moved to Kansas, with pressure below 29.30, rain generally from the Rocky Mountains over the Ohio Valley and the southern Lake region, and high winds and severe local storms from Texas and Kansas to western Pennsylvania. Storms with tornadic features occurred in Texas, Oklahoma Territory, Kansas, and Missouri. A further increase of energy was shown the morning of the 4th, when the pressure was below 29.10 in central Nebraska. On this date the rain area reached the New Jersey and south New England coasts, destructive storms occurred in Arkansas, Kansas, Nebraska, Missouri, Tennessee, Kentucky,

Illinois, Ohio, Wisconsin, Michigan, and tornadoes were noted in Arkansas, Tennessee, and Illinois. Passing northeast, with a slight loss of energy, the center reached the region east of Lake Superior on the 5th. Destructive storms occurred from Tennessee to New York; tornadoes were reported in Illinois and New York, and unusually hard south to west gales prevailed over the southern Lake region. During the 6th the storm moved to the Gulf of Saint Lawrence.

III.—Appeared north of Alberta the evening of the 4th, and the evening of the 5th was central in Saskatchewan, with pressure below 29.50. During the 6th the center moved south of east over Manitoba, and during the 7th passed north of the Lake region and probably united with low area II which occupied the Gulf of Saint Lawrence. On the 5th rain fell in Washington and Oregon, and high southwest winds prevailed over Montana. On the 6th rain fell from the north Pacific coast to the Dakotas. On the 7th the rain area extended over the northern Lake region.

IV.—Appeared near the mouth of the Rio Grande River on the 5th, and the morning of the 6th was central off Corpus Christi, Tex. By the evening of the 6th the center had reached northwestern Louisiana, with pressure below 29.90, it moved thence eastward over the north part of the Gulf States during the 7th, with pressure below 29.70, passed off the North Carolina coast and reached eastern Maine during the 8th, with pressure below 29.60 at the evening report, remained nearly stationary over eastern New England during the 9th, with pressure falling below 29.30 at the evening report, and passed thence northeastward over the Gulf of Saint Lawrence during the 10th, with pressure 29.16 at Anticosti Island at 8 p. m.

During the 5th rain set in on the middle Gulf coast, and on the 6th rain was general in the Gulf States, except in southern Texas and Florida. On the 7th the rain area extended to the Atlantic coast south of the 40th parallel, heavy rain, thunder, and hail storms occurred in Tennessee, and high southerly winds prevailed on the south Atlantic coast. On the 8th the rain area extended over the middle Atlantic states. At Wilmington, N. C., and Charleston S. C., high winds were reported from the southwest, and at Hatteras and Kitty Hawk a velocity of 46 miles per hour from the north was reported. On the 9th the rain area extended from the Lake region over the middle Atlantic and New England states, and brisk to high northwest winds were reported at coast stations from South Carolina to south New England. On the 10th rain fell from the Lake region over Pennsylvania, New York, and New England, with high west to northwest winds on the New England coast.

V.—Appeared on the Pacific coast north of Washington the morning of the 9th and the evening of that date was central over Alberta, with pressure below 29.60. Moving slowly eastward over Assinaboia by the morning of the 11th, the center passed thence southward to extreme northwestern Texas by the evening of the 12th, thence northeastward to the lower Missouri Valley during the 13th, and to the Virginia coast during the 14th, with pressure below 29.60 at the evening report of the 14th. During the 15th the center advanced northeastward and united with an area of low pressure which occupied the Gulf of Saint Lawrence.

On the 9th rain fell in Oregon and Washington and thence over Montana, the temperature rose 10° to 20° on the eastern slope of the Rocky Mountains, and the wind reached a velocity of 50 miles per hour from the south at Fort Canby, Wash. On the 10th the rain area extended over the lower Missouri valley, a subsidiary development appeared over western Texas, the wind attained a velocity of 54 miles per hour from the north at Amarillo, Tex., and destructive hailstorms were reported in central and northeastern Texas. During the 11th and 12th high area II occupied the Lake region, and this low area was deflected southward.

On the 11th the rain area extended from the Missouri Valley to the south Atlantic coast, and on the 12th was confined to the western-central valleys. On the latter-named date high

wind and rain or snow prevailed over western Minnesota, the Dakotas, and Iowa. On the 13th heavy wind, rain, and snow storms prevailed in the West and Northwest, and severe local storms were reported in Texas and Louisiana. On the 14th rain fell from the middle Mississippi valley to the Atlantic coast south of Massachusetts, high winds prevailed on the Lakes and along the south Atlantic coast, heavy thunder and hail storms occurred from Georgia to Virginia, and rain changed to snow in New Jersey and New York. During the 15th the rain area passed off the Atlantic coast, and high northeast, changing to southerly, winds prevailed on the New England coast.

VI.—Appeared off the north Pacific coast the morning of the 14th, and advanced to Alberta by the evening report of that date, with pressure below 29.50. Moving southeastward the center reached the west Gulf states on the 20th, passed thence to the Lake region by the 21st, and thence to the region north of the Gulf of Saint Lawrence by the 23d. On the 14th high winds prevailed on the north Pacific coast, reaching a velocity of 82 miles per hour from the south at Fort Canby, Wash., rain fell on the middle and north Pacific coasts, and the temperature rose 10° to 20° from Oregon to the northeast slope of the Rocky Mountains. On the 16th rain fell in the middle Mississippi and lower Missouri valleys. On the 17th the rain area extended over the Ohio Valley and Pennsylvania, severe thunder and hail storms occurred in Arkansas and western Missouri, and heavy snow was reported in extreme western Nebraska.

On the 18th rain fell from the middle-eastern slope of the Rocky Mountains to the middle Atlantic coast, severe thunder, rain, and hail storms occurred from northeastern Texas to Illinois, and heavy snow was reported in eastern Colorado. On the 19th severe thunderstorms occurred in Texas, Oklahoma Territory, Kansas, Tennessee, and Georgia. On the 20th heavy rain fell in Mississippi, Louisiana, and Arkansas, destructive local storms occurred in Kansas, Arkansas, Texas, and Louisiana, and tornadoes were reported in Arkansas and Louisiana. On

the 21st heavy rain and local storms occurred in southern Louisiana and along the middle Gulf coast, and the wind reached a velocity of 60 miles per hour from the southeast at Lexington, Ky. After the 21st this low area lost strength, and during the 23d the rain area passed off the New England and middle Atlantic coasts.

VII.—Was central on the north Pacific coast the morning of the 24th, with pressure below 29.40, passed thence to the region north of Montana by the morning of the 25th, thence to Colorado by the 26th, thence to the region east of Manitoba by the 27th, with pressure below 29.40, to the Saint Lawrence Valley by the 28th, and to the Gulf of Saint Lawrence by the 29th. On the 24th heavy gales occurred on the north Pacific coast, the wind reaching a velocity of 72 miles per hour from the southeast at Fort Canby, Wash., and rain fell from the middle and north Pacific coasts over western Montana. On the 25th the rain area extended to the western lake region. On the 26th high wind, with snow, prevailed over Nebraska and the Dakotas. On the 27th severe windstorms occurred from the Dakotas and Nebraska over the western lake region. On the 28th gales prevailed from the Lake region to the Atlantic coast, and heavy rain fell in the Southwest. High winds were noted on the North Carolina coast on the 29th.

VIII.—Appeared off the north Pacific coast on the 28th, and the morning of the 29th was central on the Washington coast, with pressure below 29.80. Passing thence southeast the storm reached Kansas by the close of the month, with pressure below 29.60. On the 28th rain fell on the middle and north Pacific coasts, and east to south gales occurred on the north Pacific coast, the wind reaching a velocity of 68 miles per hour from the south at Fort Canby, Wash. On the 29th the rain area extended over western Montana, and heavy winds were noted from the north Pacific coast to the middle plateau region. On the 30th the rain area extended to the middle Mississippi valley and the western lake region, and severe thunder and rain storms were reported from Nebraska to Illinois.

Tabulated statement showing principal characteristics of areas of high and low pressure.

Barometer.	First observed.			Last observed.			Duration.	Velocity per hour.	Maximum pressure change in 12 hours, maximum temperature change in 24 hours, and maximum wind velocity.														
	Date.	Lat. N.	Long. W.	Lat. N.	Long. W.	Station.			Rise.	Date.	Station.	Fall.	Date.	Station.	Direction.	Miles per hour.	Date.						
High areas.		°	°	°	°	Days.	Miles.		Inch.				°										
I.....	4	44	134	38	114	3.0	16	Portland, Oregon.....	.32	4	Sacramento, Cal.....	19	3	Keeler, Cal.....	n.	26	4						
II.....	7	53	117	50	83	5.5	23	Swift Current, N. W. T....	.56	7	Saint Vincent, Minn.....	24	7	Saint Vincent, Minn.....	nw.	36	8						
III.....	10	47	126	34	82	5.5	30	Pueblo, Colo.....	.46	13	Montrose, Colo.....	30	12	Springfield, Mo.....	nw.	30	14						
IV.....	17	42	126	38	87	6.5	20	Calgary, N. W. T.....	.42	20	Roseburgh, Oregon.....	18	19	Eureka, Cal.....	n.	30	18						
V.....	23	52	97	35	70	5.0	17	Montreal, Quebec.....	.54	24	Qu'Appelle, N. W. T.....	25	23	Chicago, Ill.....	se.	36	25						
VI.....	26	41	137	35	74	4.5	38	Saint Vincent, Minn.....	.72	28	Moorhead, Minn.....	27	27	Atlantic City, N. J.....	nw.	30	30						
Mean.....						4.8	24		.50								31						
Low areas.									Fall.			Rise.											
I.....	1	42	100	50	66	2.0	38	Duluth, Minn.....	.46	1	Chicago, Ill.....	20	1	Leavenworth, Kans.....	sw.	66	1						
II.....	3	51	117	47	57	4.0	36	Anticosti Island, G. of S. L.	.50	6	Green Bay, Wis.....	21	4	Amarillo, Tex.....	s.	66	4						
III.....	5	54	105	53	93	1.0	22	Prince Albert, N. W. T....	.42	5	Omaha, Nebr.....	22	6	Fort Assinaboine, Mont..	sw.	52	5						
IV.....	6	28	96	50	61	4.5	28	Charlotte, N. C.....	.34	7	Montgomery, Ala.....	11	7	Hatteras, N. C.....	n.	46	8						
V.....	9	52	115	37	76	5.0	27	{ Des Moines, Iowa.....	.50	13	Pueblo, Colo.....	21	9	Chicago, Ill.....	n.	65	14						
								{ Hatteras, N. C.....	.50	14													
VI.....	14	47	126	31	63	9.5	25	Calgary, N. W. T.....	.56	14	{ Roseburgh, Oregon.....	22	14	Fort Canby, Wash.....	s.	82	14						
VII.....	24	46	125	46	61	6.0	32	Fort Canby, Wash.....	.58	24	{ Cincinnati, Ohio.....	22	21										
VIII.....	29	48	125	39	98	1.5	44	White River, Ont.....	.46	30	Moorhead, Minn.....	17	27	.....do.....	se.	72	24					
											Pueblo, Colo.....	25	29	.....do.....	s.	68	28					
Mean.....						4.2	36		.48			20					65						

NORTH ATLANTIC STORMS FOR APRIL, 1892 (pressure in inches and millimeters; wind-force by Beaufort scale).

The paths of storms that appeared over the west part of the north Atlantic Ocean during April, 1892, are shown on Chart I. These paths have been determined from reports of observations by shipmasters received through the co-operation of the Hydrographic Office, Navy Department, and the "New York Herald Weather Service."

In April there is usually an increase of pressure from Bermuda to Greenland and Iceland and in the tropical regions of the Atlantic Ocean; elsewhere the pressure is lower than for March. The principal track of April storms is traced from Nova Scotia eastward to the 40th meridian, where it divides, one branch passing to Iceland and the other to the region west

of Ireland. From the ocean west of the British Isles one class of storms passes southeastward over the Bay of Biscay and another to the north of Scotland. An average of 1.4 storm per month traverses the ocean from coast to coast in April, and the average velocity of north Atlantic storms for that month is about 20 statute miles per hour.

In April, 1892, three storms, low areas I, II, and IV, traversed the ocean and reached the Bay of Biscay, numbers I and II having advanced from the Pacific Ocean and number IV from the Gulf of Mexico. The month opened with a storm of moderate energy east of the Grand Banks. This storm moved slowly eastward to a position west of the British Isles by the 4th, passed thence southward and was central west of the Bay of Biscay on the 5th, after which it apparently moved eastward. High pressure continued off the Atlantic coast of the United States until the night of the 3d, when low area I moved eastward over the Gulf of Saint Lawrence. This low area was central off the east coast of Newfoundland the morning of the 4th, and moved thence to mid-ocean as a storm of considerable energy by the 5th, thence to the vicinity of the Azores by the 6th, and to the Bay of Biscay and the Spanish Peninsula by the 8th, attended by gales of marked strength. On the 6th low area II moved south of east over the Gulf of Saint Lawrence and reached mid-ocean by the 8th, with pressure about 29.20 (742), where it remained nearly stationary until the 10th, apparently losing energy, and passed thence to the Bay of Biscay.

On the 8th low area IV moved off the middle Atlantic coast attended by fresh to strong gales, remained over New England and the Canadian Maritime Provinces from the 8th to 10th, with hard gales west of the Grand Banks, passed north of Newfoundland by the morning of the 11th, to mid-ocean by the 12th, and reached the Bay of Biscay and the Spanish Peninsula on the 13th. On the 13th a storm moved eastward from the Gulf of Saint Lawrence, reached mid-ocean by the 15th, and disappeared north of the region of observation. On the 18th an offshoot of low area VII appeared off the New Jersey coast, passed eastward to a position south of the Grand Banks by the 19th, thence north of the Grand Banks by the 20th, and disappeared north of the region of observation by the 21st. During the last decade of the month high pressure and generally settled weather prevailed over the ocean.

OCEAN FOG.

The limits of fog belts west of the 40th meridian, as reported by shipmasters, are shown on Chart I by dotted shading. East of the 55th meridian fog was reported on 12 dates; between

the 55th and 65th meridians on 9 dates; and west of the 65th meridian on 6 dates. Compared with the corresponding month of the last 4 years the dates of occurrence of fog east of the 55th meridian numbered 3 less than the average; between the 55th and 65th meridians 1 less than the average; and west of the 65th meridian 4 less than the average. The occurrence of fog along the steamship tracks west of the 40th meridian and at stations of the Weather Bureau along the middle Atlantic and New England coasts generally attended the approach or passage of general storms.

OCEAN ICE.

The following table shows the southern and eastern limits of the region within which icebergs or field ice were reported for April during the last 10 years:

Southern limit.			Eastern limit.		
Month.	Lat. N.	Long. W.	Month.	Lat. N.	Long. W.
April, 1883.....	40 49	52 06	April, 1883.....	48 00	43 00
April, 1884.....	41 26	48 46	April, 1884.....	45 25	43 34
April, 1885.....	41 40	49 50	April, 1885.....	44 10	39 41
April, 1886.....	40 51	46 39	April, 1886.....	47 43	30 11
April, 1887.....	40 02	50 04	April, 1887.....	48 00	38 18
April, 1888.....	41 33	50 00	April, 1888.....	47 40	49 00
April, 1889.....	43 57	50 20	April, 1889.....	47 16	43 11
April, 1890.....	40 00	49 40	April, 1890.....	47 26	35 42
April, 1891.....	40 01	48 24	April, 1891.....	45 33	43 32
April, 1892.....	42 46	49 37	April, 1892.....	48 58	44 27
Mean.....	41 18	49 33	Mean.....	47 01	41 04

* Isolated iceberg.

The limits of the region within which icebergs or field ice were reported for April, 1892, are shown on Chart I by ruled shading.

The southernmost ice reported, an iceberg observed on the 29th, in the position given, was about $1\frac{1}{2}^{\circ}$ north of the average southern limit, and the easternmost ice reported, several icebergs noted on the 21st in the position given in the table, was more than 3° west of the average eastern limit of ice for April.

Compared with the preceding month there was a marked increase in the quantity of ice reported. Icebergs and field ice were encountered along the east edge of the Banks of Newfoundland throughout the month, and along the southeast Newfoundland coast on the 2d and 13th. On the 21st a large ice field was reported about 80 miles east of Cape Canso, Nova Scotia. On the 24th a schooner en route from Saint Pierre to Sydney, C. B. I., was sunk by heavy ice.

TEMPERATURE OF THE AIR (expressed in degrees, Fahrenheit).

Many of the voluntary stations do not have standard thermometers or shelters.

The distribution of mean temperature over the United States and Canada for April, 1892, is exhibited on Chart II by dotted isotherms. In the table of miscellaneous meteorological data the monthly mean temperature and the departure from the normal are given for regular stations of the Weather Bureau. The figures opposite the names of the geographical districts in the columns for mean temperature and departure from the normal show, respectively, the average for the several districts. The normal for any district may be found by adding the departure to the current mean when the departure is below the normal and subtracting when above. The monthly mean temperature for regular stations of the Weather Bureau represents the mean of the maximum and minimum temperatures.

The mean temperature was highest in the Colorado Desert, California, in the lower Rio Grande valley, and over extreme southern Florida, where it was above 75. The mean readings were above 60 in South Carolina, Georgia, the Gulf States, western and southern Arizona, and a great part of southern California, and were above 50 south of a line traced from the

southern New Jersey coast to north-central Kansas, thence to south-central New Mexico, thence west-northwest over Arizona and along the Sierra Nevada Mountain range to north-central California, and thence to the California coast north of San Francisco. The mean temperature was lowest on the north shore of Lake Superior and at elevated stations in central Colorado, where it was below 30. The mean values were below 35 in the lower Saint Lawrence valley and from Upper Michigan over northern Wisconsin, northern Minnesota, and northern North Dakota, and were below 40 north of a line traced from southeastern Maine to eastern Montana, thence southward to south-central Colorado, and thence to extreme northwestern Montana.

DEPARTURES FROM NORMAL TEMPERATURE.

The mean temperature was generally below the normal, except in central and eastern Texas, over the Florida Peninsula, over the east part of the Lake region, and in southeastern New York, New England, and the Canadian Maritime Provinces. The most marked departure below the normal temper-

ature occurred from the middle and north Pacific coasts to the Dakotas, where it was 4 to 6, and the greatest excess in temperature was noted in New Brunswick, Nova Scotia, and south-eastern Texas, where it exceeded 4.

DEVIATIONS FROM NORMAL TEMPERATURE.

The following table shows for certain stations, as reported by voluntary observers, (1) the normal temperature for April for a series of years; (2) the length of record during which the observations have been taken, and from which the normal has been computed; (3) the mean temperature for April, 1892; (4) the departure of the current month from the normal; (5) and the extreme monthly mean for April during the period of observation and the years of occurrence:

State and station.	(1) Normal for the month of April.	(2) Length of record.	(3) Mean for April, 1892.	(4) Departure from normal.	(5) Extreme monthly mean for April.			
					Highest.	Year.	Lowest.	Year.
<i>Arizona.</i>	°	Years	°	°	°		°	
Fort Apache.....	52.6	20	50.1	- 2.5	59.5	1879	47.5	1884
Fort Mohave.....	70.8	21	59.8	- 1.0	77.1	1881	62.2	1891
Whipple Barracks.....	51.3	20	50.0	- 1.3	61.8	1876	45.4	1884
<i>Arkansas.</i>								
Lead Hill.....	61.9	10	.....	.....	65.3	1888	56.7	1884
<i>California.</i>								
Fort Bidwell.....	47.4	21	40.8	- 6.6	55.9	1881	40.5	1872
Riverside.....	60.5	10	59.8	- 0.7	63.8	1885	57.8	1891
<i>Colorado.</i>								
Las Animas.....	51.4	10	49.1	- 2.3	56.7	1888	46.2	1884
<i>Florida.</i>								
Merritts Island.....	71.6	10	73.7	+ 2.1	75.4	1883	67.0	1886
<i>Georgia.</i>								
Forayth.....	65.1	18	66.0	+ 0.9	68.8	1888	61.0	1875
<i>Idaho.</i>								
Boise Barracks.....	50.3	18	46.1	- 4.2	56.5	1888	44.2	1883
Fort Sherman.....	46.4	8	45.08	- 1.4	50.9	1889	41.8	1882
<i>Illinois.</i>								
Centralia.....	55.8	13	49.0	- 6.8	60.5	1886	49.0	1892
<i>Indiana.</i>								
La Fayette.....	50.6	12	50.0	- 0.6	53.9	1886	45.4	1881
<i>Indian Territory.</i>								
Fort Supply.....	56.8	13	56.6	- 0.2	61.6	1888	50.0	1874
<i>Iowa.</i>								
Cresco.....	43.4	20	41.9	- 1.5	47.3	1878	37.5	1874
<i>Kansas.</i>								
Eureka Ranch.....	55.3	9	49.8	- 5.5	58.6	1888	49.8	1892
Independence.....	57.6	20	56.6	- 1.0	61.7	1878	48.3	1874
Salina.....	55.9	9	52.2	- 3.7	60.1	1889	49.6	1884
<i>Louisiana.</i>								
Grand Coteau.....	69.5	9	69.8	+ 0.3	70.9	1885	68.0	1891
<i>Maine.</i>								
Orono.....	39.9	22	42.8	+ 2.9	45.1	1889	33.3	1874
<i>Maryland.</i>								
Cumberland.....	49.0	33	49.3	+ 0.3	57.6	1881	42.2	1839
<i>Michigan.</i>								
Kalamazoo.....	47.1	15	46.7	- 0.4	52.9	1878	42.0	1881
<i>Missouri.</i>								
Sedalia.....	57.1	29	53.4	- 3.7	61.5	1888	52.7	1885
<i>Montana.</i>								
Fort Custer.....	46.3	11	.....	.....	50.6	1889	42.1	1880
<i>Nebraska.</i>								
Fort Robinson.....	47.9	8	41.8	- 6.1	52.8	1888	41.6	1884
Genoa (near).....	49.2	16	46.0	- 3.2	53.0	1890	42.2	1881
<i>Nevada.</i>								
Brown.....	55.3	21	54.0	- 1.3	63.4	1888	46.8	1883
Carson City.....	48.8	15	45.5	- 3.3	56.1	1881	43.1	1880
<i>New Hampshire.</i>								
Hanover.....	41.3	57	42.3	+ 1.0	46.9	1887	33.7	1874
<i>New Mexico.</i>								
Deming.....	63.4	10	68.0	+ 4.6	69.6	1885	57.1	1882
Fort Wingate.....	49.2	21	45.6	- 3.6	57.3	1881	39.2	1874
<i>New York.</i>								
Cooperstown.....	40.9	38	41.2	+ 0.3	51.6	1876	33.6	1874
Plattsburgh Barracks.....	41.4	21	40.9	- 0.5	47.9	1876	33.6	1874
<i>North Carolina.</i>								
Lenoir.....	55.8	19	54.1	- 1.7	60.0	1887	42.6	1885
<i>Oklahoma.</i>								
Fort Reno.....	60.5	9	.....	.....	64.3	1889	55.8	1884
Fort Sill.....	61.0	20	62.4	+ 0.8	65.5	1880	53.7	1874
<i>Oregon.</i>								
Bandon.....	49.6	8	46.6	- 3.0	52.5	1889	45.3	1886
Eola.....	49.5	21	51.1	+ 1.6	54.8	1875	43.2	1872
<i>Pennsylvania.</i>								
Dyberry.....	42.2	26	42.4	+ 0.2	49.7	1878	35.0	1874
Grampian Hills.....	43.4	27	44.3	+ 0.9	52.2	1878	29.0	1875
Wellborough.....	43.9	13	41.0	- 2.9	52.2	1886	40.1	1881
<i>South Carolina.</i>								
Statesburgh.....	62.4	11	60.6	- 1.8	64.6	1882	60.1	1884
<i>South Dakota.</i>								
Fort Sully.....	47.0	20	43.8	- 3.2	55.5	1887	39.2	1875
<i>Texas.</i>								
Austin.....	70.8	19	69.6	- 1.2	73.2	1888	63.1	1874
Silver Falls.....	61.4	6	63.1	+ 1.7	63.3	1888	59.4	1886
<i>Utah.</i>								
Terrace.....	52.9	19	50.6	- 2.3	62.5	1888	45.4	1882
<i>Vermont.</i>								
Stratford.....	40.8	19	41.0	+ 0.2	48.3	1886	34.9	1874
<i>Virginia.</i>								
Dale Enterprise.....	53.9	12	51.7	- 2.2	59.1	1886	51.6	1882

Deviations from normal temperature—Continued.

State and station.	(1) Normal for the month of April.	(2) Length of record.	(3) Mean for April, 1892.	(4) Departure from normal.	(5) Extreme monthly mean for April.			
					Highest.	Year.	Lowest.	Year.
<i>Washington.</i>	°	Years	°	°	°		°	
Fort Townsend.....	48.8	18	45.8	- 3.0	52.4	1889	45.8	1892
<i>West Virginia.</i>								
Parkersburg.....	54.2	11	51.6	- 2.6	64.1	1882	43.0	1885
<i>Wisconsin.</i>								
Embarrass.....	44.4	21	41.1	- 3.3	54.9	1879	34.7	1874
Madison.....	44.0	24	43.1	- 0.9	52.5	1878	37.4	1874
<i>Wyoming.</i>								
Fort Washakie.....	43.1	9	39.0	- 4.1	46.6	1889	38.6	1888

YEARS OF HIGHEST MEAN TEMPERATURE FOR APRIL.

At Eastport, Me., Boston, Mass., and Abilene and San Antonio, Tex., the mean temperature for the current month was the highest ever reported for April by 0.6, 0.4, 0.2, and 2.4, respectively. The highest mean temperature for April was noted from the north Pacific coast to North Dakota in 1889; from Oregon and California over the plateau region to Kansas and Nebraska in 1888; and from the middle and upper Mississippi valleys over the Ohio Valley, the Lake region, and New England, save along the coast, in 1878.

YEARS OF LOWEST MEAN TEMPERATURE FOR APRIL.

At Centralia, Ill., Springfield, Mo., Eureka Ranch, Kans., Valentine, Nebr., Rapid City, S. Dak., Fort Assinaboine, Mont., Spokane, Walla Walla, and Fort Townsend, Wash., Winnemucca, Nev., and Red Bluff, Cal., the current month was the coolest April on record, the greatest departure below the lowest mean previously reported being 3.0 at Fort Assinaboine, Mont. The lowest mean temperature for April was noted generally from the Mississippi River over the Ohio Valley, the Lake region, and the Atlantic coast states north of Virginia in 1874.

MAXIMUM TEMPERATURE.

At Fort Smith, Ark., Dodge City, Kans., and San Antonio, Tex., the maximum temperature was as high as previously reported for April. The highest temperature reported by a regular station of the Weather Bureau in April of preceding years was 105, at Yuma, Ariz., in 1876. The highest temperature reported by a regular station of the Weather Bureau for the current month was 98, at Yuma, Ariz., on the 9th, and the highest temperature reported by a voluntary observer was 106, at Fort Ringgold, Tex. The temperature rose above 100 in the lower Rio Grande, lower Colorado, and lower Gila valleys; it was above 90 at stations in the south Atlantic and Gulf states, on the middle and southeast slopes of the Rocky Mountains, and over the south and west parts of the southern plateau region; and was above 80 south of a line traced from the Virginia coast to eastern Pennsylvania, thence to northern Missouri, thence to southeastern South Dakota, thence to eastern Colorado, thence to southern New Mexico, thence over southern Nevada to the San Joaquin Valley, Cal., and thence southward to the California coast.

The maximum temperature was lowest on the extreme north Pacific coast and in eastern Upper Michigan, where it was 60 or below, and the maximum values were below 70 on the southeast and east New England coasts, at Hatteras, N. C., Buffalo, N. Y., and north of a line traced from northern Lower Michigan to South Dakota, thence southward over the mountains of Colorado, thence to southwestern Wyoming, thence to central Nevada, thence to southeastern Washington, and thence to west-central Washington. The maximum temperature was also below 70 west of this line continued southward inside the coast line to a point south of San Francisco, Cal.

MINIMUM TEMPERATURE.

At Sacramento, Cal., the minimum temperature, 36, noted on the 17th, was the lowest temperature ever reported at that

station for April, and at Olympia, Wash., the minimum, 27, recorded on the 7th, was as low as previously reported for April. The lowest temperature noted for the current month by a regular station of the Weather Bureau was -2, at Saint Vincent, Minn., on the 28th, and temperature below zero was reported at Rocky Mountain stations in the interior of Colorado and in northeastern southern Idaho. The minimum temperature was below 10 in northern North Dakota and northern Minnesota, and at stations in central and western Wyoming, and was below 20 in northern New England, and north of a line traced from east-central Lower Michigan to South Dakota, thence to central New Mexico, and thence to northwestern Washington. The highest minimum temperature was 64 at Key West, Fla., and the minimum values were above 50 over the southern part of the Florida Peninsula and along the immediate Gulf coast west of the mouth of the Mississippi River.

LIMITS OF FREEZING WEATHER.

The southern limit of freezing weather is shown on Chart V by a line traced from the Virginia coast to northern Georgia, thence to southern Illinois, and thence to southern Arizona. The western limit of freezing weather is shown by this line continued from south-central Arizona northwestward along the line of the Sierra Nevada Mountains to southwestern Oregon, thence eastward over the valley of the Columbia River, and thence to extreme northwestern Washington.

RANGES OF TEMPERATURE.

The greatest daily range of temperature is shown in the table of miscellaneous meteorological data. The greatest monthly range of temperature occurred on the middle-eastern slope of the Rocky Mountains and in the lower valley of the Red River of the North, where it exceeded 60. From those districts the monthly ranges decreased eastward to less than 30 on the southeast New England coast, southeastward to less than 20 over extreme southern Florida, southward to less than 30 on the west Gulf coast, and westward to less than 30 at stations on the middle and north Pacific coasts.

TEMPERATURE, JANUARY TO APRIL, INCLUSIVE.

For the period January 1 to April 30, 1892, the temperature averaged about normal in the lower lake region, in the upper Mississippi and Missouri valleys, on the middle-eastern and southeastern slopes of the Rocky Mountains, over the southern plateau region, and along the middle and south Pacific coasts. In the extreme northwest the mean temperature averaged about 3, over the northern plateau region about 2, and in New England, the upper lake region, on the northeast slope of the Rocky Mountains, and along the north Pacific coast about 1 above the normal temperature for the period named. In the south Atlantic and east Gulf states, at Key West, Fla., and over the middle plateau region the mean temperature was about 2 deficient, and in the middle Atlantic states, the Ohio Valley and Tennessee, and the west Gulf states the deficiency was about 1.

PERIODS OF HIGH TEMPERATURE.

The highest temperature of the month was noted from North Carolina over the middle Atlantic and New England states and the lower lake region from the 3d to 5th, the maximum temperature rising above 80 on the 3d in Maryland, District of Columbia, Virginia, North Carolina, South Carolina, Alabama, eastern Tennessee, and Kentucky; along the middle and south Pacific coasts and over the west parts of the middle

and southern plateau regions from the 6th to 9th; in the south Atlantic states, the interior of the east and west Gulf states, and in western Missouri, eastern Kansas, Oklahoma and Indian territories on the 17th and 18th; on the north Pacific coast on the 20th; in the extreme northwest and over the west part of the upper lake region on the 22d and 23d; over a great part of the upper lake region and in the Ohio and upper Mississippi valleys on the 27th; and in the lower Missouri valley, on the middle-eastern slope of the Rocky Mountains, and over the east part of the middle plateau region on the 29th and 30th.

PERIODS OF LOW TEMPERATURE.

The principal cold wave of the month appeared on the northeast slope of the Rocky Mountains on the 8th, with temperature 16 to 22 below freezing, extended over the Missouri, upper and middle Mississippi, and lower Ohio valleys, and the Lake region on the 9th, and reached the Atlantic and east Gulf coasts on the 10th, attended by the lowest temperature of the month and carrying the line of freezing weather to northern South Carolina, southern Missouri, and Oklahoma Territory. The lowest temperature of the month was noted on the south Pacific coast from the 1st to 3d; on the north Pacific coast and in Texas south of the 30th parallel on the 7th; on the middle Pacific coast on the 17th and 18th; and in north and east parts of the Lake region, New York, and New England on the 24th and 25th.

FROST.

Frost injurious to vegetation was reported as follows: 4th, heavy frost injured vegetation at Eureka, Cal. 5th, frost injured garden vegetables at Dodge City, Kans. 9th, heavy frost caused much damage to early fruit and berries at Oklahoma City, Okla., damaged garden vegetation at Dodge City, Kans., and injured fruit at Burlington, N. C., and Platte River, Mo. 10th, the temperature fell to 30.7 at Knoxville, Tenn., and heavy frost damaged fruit; tender vegetation was killed at Nashville, Tenn.; corn and fruit were injured at Atlanta, Ga.; light frost injured tender vegetation at Columbia, S. C.; and heavy frost damaged early vegetation and fruit at Southport, N. C., and Richmond, Va.; light frost occurred as far south as Charleston, S. C. 11th, heavy frost damaged fruit and vegetables in North Carolina, western Virginia, and north-central Tennessee. 14th, ice and heavy frost formed at Dodge City, Kans.

16th, heavy frost destroyed vegetables in North Carolina, and injured cotton, corn, and vegetation on low ground about Augusta, Ga., and light frost was reported at Charleston, S. C., and Montgomery, Ala. 18th, frost nipped vines south and west of Fresno, Cal. 19th, heavy frost damaged fruit at Olympia, Wash. 21st, heavy frost injured fruit and vegetation about Dodge City, Kans. 26th, frost injured grapevines at La Grange, Cal., and injured grapes and tender vegetation at Lodi, Cal. 28th, a severe cold wave prevailed in the Northwest, the minimum temperature at Fort Assinaboine, Mont., 20, being the lowest noted at that station for the third decade of April. 29th, heavy frost killed tender plants at Fort Madison, Iowa. Frost was reported at stations in the Florida Peninsula between the 28th and 30th parallels on the 4th, 16th, and 25th; along the immediate middle Gulf coast on the 21st, 22d, 24th, and 25th; in central Texas north of the 31st parallel on the 7th; at Tucson, Ariz., on the 1st, 5th, and 6th; and at Los Angeles, Cal., on the 20th and 21st.

PRECIPITATION (expressed in inches and hundredths).

The distribution of precipitation over the United States and Canada for April, 1892, as determined from the reports of about 2,000 stations, is exhibited on Chart III. In the table of miscellaneous meteorological data the total precipitation and the departure from the normal are given for regular sta-

tions of the Weather Bureau. The figures opposite the names of the geographical districts in the columns for precipitation and departure from the normal show, respectively, the averages for the several districts. The normal for any district may be found by adding the departure to the current mean when

the precipitation is below the normal and subtracting when above.

In April the monthly precipitation is usually greatest in central Mississippi and at points along the immediate Pacific coast north of the 40th parallel, where it exceeds 8.00. It is 4.00 to 6.00 generally in the Gulf and south Atlantic states, Kentucky, Tennessee, and southern Missouri, on the southeast New England coast, in central Utah, and on the Pacific coast north of the 38th parallel. Over a large part of the Rocky Mountain and plateau regions the monthly precipitation is less than 1.00.

In April, 1892, the monthly precipitation exceeded 10.00 in an area extending from southern Tennessee to northern Louisiana, in small areas in southern Mississippi, southeastern Louisiana, south-central Kentucky, south-central Illinois, and at points along the Oregon and Washington coasts. Over a great part of New England, western New York, north-central Pennsylvania, Georgia, and Florida, and from central and southern Texas over the southern and central parts of the plateau region to the Pacific coast south of San Francisco, Cal., the precipitation for the month was less than 1.00.

DEPARTURES FROM NORMAL PRECIPITATION.

The monthly precipitation was in excess of the average for April in the central valleys, Virginia, and in the Pacific coast states north of the 40th parallel; elsewhere it was deficient. The greatest excess occurred on the Washington coast, at Valentine, Nebr., Saint Louis, Mo., and Springfield, Ill., where it was more than 4.00, and the most marked deficiency was noted from southern and central Alabama to the Atlantic coast between Wilmington, N. C., and Jacksonville, Fla., where it was 2.00 to 4.00. The deficiency was more than 2.00 from east-central New York to the Massachusetts and southwest Maine coasts, and in central Texas.

Considered by districts the average percentage of the normal in districts where the monthly precipitation was in excess was about as follows: North Pacific coast, 182; upper Mississippi valley, 179; Missouri Valley, 178; extreme northwest, 164; northern plateau region, 158; Ohio Valley and Tennessee, 157; northeastern slope, 155; middle Atlantic states, 112; upper lake region, 108; west Gulf states, 104. In districts where the precipitation was deficient the percentage of the normal was about as follows: South Pacific coast, 24; southeastern slope, 38; south Atlantic states, 40; New England, 52; middle-eastern slope, 53; Key West, Fla., 54; southern plateau, 67; lower lake region, 70; middle Pacific coast, 75; middle plateau, 82; east Gulf states, 88.

DEVIATIONS FROM AVERAGE PRECIPITATION.

The following table shows for certain stations, as reported by voluntary observers, (1) the average precipitation for April for a series of years; (2) the length of record during which the observations have been taken and from which the average has been computed; (3) the total precipitation for April, 1892; (4) the departure of the current month from the average; (5) and the extremes for April during the period of observation and the years of occurrence:

State and station.	(1) Average for the month of April.	(2) Length of record.	(3) Total for April, 1892.	(4) Departure from average.	(5) Extremes for April.			
					Greatest.		Least.	
					Am't.	Year.	Am't.	Year.
<i>Arizona.</i>	<i>Inches.</i>	<i>Years</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Year.</i>	<i>Inches.</i>	<i>Year.</i>
Fort Apache.....	0.84	16	1.36	+ 0.52	1.77	1876	T.	1891
Fort Mohave.....	0.41	31	T.	- 0.41	4.05	1871	0.00	1880
Whipple Barracks.....	1.68	20	0.58	- 1.10	3.86	1878	T.	1891
<i>Arkansas.</i>								
Lead Hill.....	4.11	10	4.30	+ 0.19	6.61	1882	1.57	1889
<i>California.</i>								
Fort Bidwell.....	1.65	20	3.28	+ 0.63	5.60	1880	0.16	1888
Riverside.....	1.07	11	0.21	- 0.86	3.13	1885	0.06	1890
<i>Colorado.</i>								
Las Animas.....	1.50	10	0.05	- 1.45	2.64	1886	0.05	1892

Deviations from average precipitation—Continued.

State and station.	(1) Average for the month of April.	(2) Length of record.	(3) Total for April, 1892.	(4) Departure from average.	(5) Extremes for April.			
					Greatest.		Least.	
					Am't.	Year.	Am't.	Year.
<i>Florida.</i>	<i>Inches.</i>	<i>Years</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Year.</i>	<i>Inches.</i>	<i>Year.</i>
Merritts Island.....	4.25	14	1.04	- 3.21	9.74	1878	0.53	1885
<i>Georgia.</i>								
Forsyth.....	4.04	18	0.55	- 3.49	9.59	1883	0.55	1888, 1892
<i>Idaho.</i>								
Boise Barracks.....	1.64	18	1.25	- 0.39	2.43	1886	0.00	1890
Fort Sherman.....	1.45	8	2.60	+ 1.15	2.60	1892	0.00	1885
<i>Illinois.</i>								
Centralia.....	3.31	13	11.96	+ 8.65	11.96	1892	1.40	1888
<i>Indiana.</i>								
La Fayette.....	3.08	12	7.51	+ 4.43	7.51	1892	0.84	1889
<i>Indian Territory.</i>								
Fort Supply.....	2.73	13	0.55	- 2.18	8.60	1885	0.28	1891
<i>Iowa.</i>								
Cresco.....	2.15	20	5.68	+ 3.53	5.68	1892	1.11	1883
<i>Kansas.</i>								
Independence.....	3.73	20	4.71	+ 0.98	6.68	1889	1.64	1883
Salina.....	2.70	9	1.39	- 1.41	7.30	1885	0.16	1888
<i>Louisiana.</i>								
Grand Coteau.....	4.59	9	3.34	- 1.25	10.64	1890	0.87	1891
<i>Maine.</i>								
Orono.....	2.93	22	1.12	- 1.81	5.08	1887	1.12	1892
<i>Maryland.</i>								
Cumberland.....	2.38	20	3.21	+ 0.83	6.50	1874	0.60	1879
<i>Michigan.</i>								
Kalamazoo.....	2.57	16	2.59	+ 0.02	8.00	1880	0.92	1876
<i>Missouri.</i>								
Sedalia.....	3.09	13	5.18	+ 2.09	5.18	1892	1.33	1888
<i>Montana.</i>								
Fort Custer.....	1.11	12	.....	.....	2.16	1887	0.51	1885
<i>Nebraska.</i>								
Fort Robinson.....	1.65	8	3.93	+ 2.28	3.93	1892	0.47	1886
Genoa (near).....	2.75	16	4.05	+ 1.30	5.32	1885	1.20	1878
<i>Nevada.</i>								
Brown.....	0.45	21	0.25	- 0.20	1.47	1878	0.00	*
Carson City.....	0.98	15	0.48	- 0.50	5.02	1880	0.03	1889
<i>New Hampshire.</i>								
Hanover.....	2.37	49	0.93	- 1.44	3.40	1874	0.38	1872
<i>New Mexico.</i>								
Deming.....	0.09	10	0.10	+ 0.01	0.50	1888	0.00	*
Fort Wingate.....	0.91	21	1.05	+ 0.14	2.70	1877	0.07	1874
<i>New York.</i>								
Cooperstown.....	2.92	38	1.38	- 1.54	4.10	1874	0.96	1881
Plattsburgh Barracks.....	1.65	21	0.97	- 0.68	3.98	1871	0.30	1881
<i>North Carolina.</i>								
Lenoir.....	3.59	20	3.10	- 0.49	7.80	1874	1.30	1876, 1885
<i>Oklahoma.</i>								
Fort Reno.....	2.47	9	1.12	- 1.35	6.02	1890	0.89	1887
Fort Bill.....	2.89	20	2.56	- 0.33	8.77	1890	0.77	1871
<i>Oregon.</i>								
Bandon.....	4.85	14	6.11	+ 1.26	11.35	1891	0.97	1885
Eola.....	2.70	21	5.07	+ 2.37	6.50	1883	0.89	1888
<i>Pennsylvania.</i>								
Dyberry.....	2.78	23	1.54	- 0.94	5.07	1874	0.80	1882
Grampian Hills.....	3.44	21	2.34	- 1.10	6.11	1874	1.35	1870
Wellsborough.....	4.69	13	0.61	- 4.08	10.77	1886	0.61	1892
<i>South Carolina.</i>								
Statesburgh.....	2.30	11	1.30	- 1.00	4.17	1883	0.83	1888
<i>South Dakota.</i>								
Fort Sully.....	1.96	21	4.82	+ 2.86	4.82	1892	0.14	1884
<i>Texas.</i>								
Austin.....	3.80	19	0.10	- 3.70	7.78	1884	T.	1887
Silver Falls.....	3.07	6	0.00	- 3.07	4.58	1891	0.00	1892
<i>Utah.</i>								
Terrace.....	0.40	19	0.40	0.00	1.74	1884	0.00	*
<i>Vermont.</i>								
Stratford.....	2.73	19	1.05	- 1.68	12.20	1874	0.60	1873, 1881
<i>Virginia.</i>								
Dale Enterprise.....	3.66	12	2.94	- 0.72	7.13	1882	0.75	1881
<i>Washington.</i>								
Fort Townsend.....	1.59	16	3.42	+ 0.83	2.98	1883	0.38	1877
<i>West Virginia.</i>								
Parkersburg.....	3.16	7	3.97	+ 0.81	5.00	1887	2.20	1891
<i>Wisconsin.</i>								
Embarras.....	2.79	21	2.50	- 0.29	5.20	1880	1.20	1889
Madison.....	4.39	23	3.94	- 0.45	5.48	1880	0.96	1887
<i>Wyoming.</i>								
Fort Washakie.....	1.65	9	2.33	+ 0.68	3.73	1883	0.51	1888

*Frequently.

PRECIPITATION, JANUARY TO APRIL, 1892.

For the period January to April, 1892, inclusive, the precipitation averaged about normal in the upper lake region, the middle Atlantic and east Gulf states, and over the middle and northern plateau regions. In the Missouri Valley and over the southern plateau region the precipitation was about one-half greater, and in the extreme northwest, in the upper Mississippi valley, and on the northeast and middle-eastern slopes of the Rocky Mountains it was one-tenth to three-tenths greater than usual. In the middle and south Atlantic, New England, and west Gulf states, at Key West, Fla., the Ohio Valley and Tennessee, the lower lake region, on the southeast

slope of the Rocky Mountains, and along the Pacific coast the precipitation was seven-tenths of the usual amount for the period named.

YEARS OF GREATEST PRECIPITATION FOR APRIL.

At Saint Louis, Mo., Springfield and Centralia, Ill., La Fayette, Ind., Keokuk, Davenport, and Cresco, Iowa, La Crosse, Wis., Huron and Fort Sully, S. Dak., Sedalia, Mo., Valentine and Fort Robinson, Nebr., Fort Sherman, Idaho, Walla Walla and Fort Canby, Wash., and Astoria, Oregon, the precipitation for the current month was the greatest on record for April. In Maryland, the District of Columbia, and eastern Virginia the greatest precipitation for April occurred in 1889; over the west part of the middle plateau region in 1887; over the east parts of the middle and northern plateau regions in 1886; on the Maine coast in 1884; in the interior of the south Atlantic states in 1883; along the middle and south Atlantic coasts, and in the lower lake region and upper Ohio valley in 1880; along the immediate south Atlantic coast in 1877; and in areas from New England to the lower Mississippi valley in 1874.

YEARS OF LEAST PRECIPITATION FOR APRIL.

At Portland and Orono, Me., Boston, Mass., New York and Albany, N. Y., Erie and Wellsborough, Pa., Charleston, S. C., Savannah, Ga., Jacksonville and Pensacola, Fla., San Antonio and Silver Falls, Tex., Las Animas, Colo., and Keeler, Cal., the precipitation for the current month was the least ever reported for April. On the middle and south Pacific coasts the least precipitation for April was noted in 1888; in the west Gulf states in 1887; on the north Pacific coast in 1885; and from New Mexico to Nebraska in 1880.

EXCESSIVE PRECIPITATION.

The following tables show, by states, the number of stations reporting monthly precipitation to equal or exceed 10.00; precipitation to equal or exceed 2.50 in 24 hours; and precipitation to equal or exceed 1.00 in 1 hour in April, 1892:

Monthly precipitation to equal or exceed 10.00.

State.	Number of stations.	State.	Number of stations.
Tennessee.....	13	Georgia.....	4
Louisiana.....	9	Oregon.....	4
Alabama.....	7	Arkansas.....	2
Mississippi.....	7	Kentucky.....	2
Illinois.....	5	Washington.....	2

Precipitation to equal or exceed 2.50 in 24 hours.

State.	Number of stations.	Dates.	State.	Number of stations.	Dates.
Louisiana.....	27	6, 13, 19-20, 20, 21, 21-22, 22, 23, 23-24, 24, 24-25, 25.	Georgia.....	9	5-6, 5-7, 6.
Tennessee.....	21	2, 5-6, 6, 7, 10-11, 19-20, 20, 20-21.	Iowa.....	5	3, 3-4, 4, 17-18, 30.
Mississippi.....	18	1-2, 2, 4, 4-6, 6, 6-7, 18, 20, 21, 21-22.	Kentucky.....	5	20-21, 21.
Arkansas.....	15	3-4, 6, 6-7, 7, 19, 20.	South Dakota.....	5	3, 3-4, 4, 4-5, 5.
Illinois.....	15	3, 3-4, 4, 17.	North Carolina.....	5	5-6, 6, 21-22.
Missouri.....	14	3, 3-4, 30.	California.....	3	1-3, 13-14.
Alabama.....	13	4-5, 5, 5-6, 5-7, 6, 6-8, 7, 19.	Indian Territory.....	2	27-28, 28.
			Florida.....	1	24.
			Indiana.....	1	3-4.
			Michigan.....	1	4-5.
			Oregon.....	1	24.
			Texas.....	1	18.

Precipitation to equal or exceed 1.00 in 1 hour.

Alabama.....	3	6, 7, 28.	Indian Territory..	1	28.
Louisiana.....	3	21, 23.	Iowa.....	1	17.
Texas.....	3	29.	Mississippi.....	1	21.
Missouri.....	2	3, 4.	North Carolina....	1	22.
Arkansas.....	1	20.	Oklahoma Ter.....	1	27.
Illinois.....	1	3.	South Dakota.....	1	25-26.

Table of excessive precipitation, April, 1892.

State and station.	Monthly rainfall to inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall 1 inch, or more, in one hour.		
		Amt.	Day.	Amt.	Time.	Day.
Alabama.						
Carrollton	Inches.	Inches.		Inches	h. m.	
Cordova		2.69	6			
Decatur a		6.91	6-8			
Double Springs	11.14	5.42	5-6			
Florence a		4.31	5-6			
Florence b	16.07	8.71	5-7			
Gadsden	14.78					
Jasper		7.43	5-7			
Mountain Home		5.09	5-6			
Newburgh	11.57					
Scottsboro	13.20	4.42	5	1.17	1 00	28
Do	13.85	5.55	5	1.75	1 00	6
Talladega		3.13	19			
Tuscumbia a.		4.24	7	4.24	1 45	7
Valley Head	13.94	6.84	4-5			
	11.31	6.89	5-6			
Arkansas.						
Arkadelphia		2.80	6			
Arkansas City	10.22	3.60	7			
Black Rock		3.42	20	3.42	0 40	20
Dallas		3.25	3-4			
El Dorado		2.85	6			
Gaines Landing	11.06	3.50	7			
Helena a		2.53	7			
Do		2.59	20			
Helena b		2.73	7			
Hot Springs		2.50	6-7			
Little Rock		3.84	20			
Lonoke		2.50	7			
Do		4.25	20			
Madding		2.63	7			
Marshall		4.66	3-4			
Newport a		2.53	20			
Newport b		3.85	20			
Rogers		3.50	19-20			
Stuttgart		3.00	6-7			
California.						
Julian		5.92	1-2			
Upper Mattole		3.74	13-14			
Florida.						
Myers		3.90	24			
Georgia.						
Adamsville		5.63	5-6			
Atlanta	10.73	3.19	5-6			
Canton		3.31	5-6			
Dahlonega		4.53	5-6			
Diamond		10.82	5-58			
La Fayette		10.45	5-55			
Marietta		4.25	6			
Rome	10.72	5.54	5-6			
Toccoa		3.79	5-6			
Illinois.						
Bloomington		2.78	3-4			
Carlinville		3.30	3-4			
Do		3.04	17			
Centralia		11.96	4-00			
Charleston		10.11	6.12	3-4		
Collinsville		10.27	5.21	3		
Elsworth		4.00	4			
Fairmount		2.60	3			
Jordan Grove		11.03	7-00	3-4		
Lanark		2.64	3			
Pana		11.99	7-00	3-4		
Paris		2.90	3-4			
Philo				1.00	0 45	
Rushville		3.52	3-4			
Springfield		2.71	3-4			
Sycamore		2.70	3-4			
Watseka		2.83	3-4			
Indiana.						
Terre Haute		3.11	3-4			
Indian Territory.						
Healdton		5.97	28	5.97	3 00	28
South McAlester		2.68	27-28			
Iowa.						
Bonaparte		2.52	3			
College Springs		2.68	30			
Fort Madison		2.70	3			
Keokuk		2.64	3-4			
Keosauqua		2.60	4			
Moor		3.00	3			
Murray		3.58	17-18	1.50	1 30	17
Kentucky.						
Bowling Green		10.84				
Falmouth		2.89	21			
Franklin		11.78	3-72	20-21		
Louisville		3.00	20-21			
Shelbyville		3.23	20-21			
Springfield		3.10	20-21			
Louisiana.						
Abbeville		3.90	21			
Alexandria		2.73	2-3			
Amité City		3.15	21			
Do		2.90	23-24			
Baton Rouge		5.97	21-23			
Do		2.65	24-25			
Cheneyville		3.60	21	3.60	2 30	21
Clinton		3.26	21			
Do		2.78	25			
Coushatta a		2.52	6			
Donaldsonville		3.10	22			
Emilie		6.62	21-22			

Table of excessive precipitation—Continued.

State and station.	Monthly rainfall in inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall of 1 inch, or more, in one hour.		
		Amt.	Day.	Amt.	Time.	Day.
Louisiana—Continued.						
Farmerville	10.00	4.00	13			
Grand Cane		3.00	6			
Do.		2.80	20			
Hammond	10.63	5.98	21-22			
Houma		4.05	24-25			
Jeanerette		4.50	21			
Do.		2.85	24			
Luling		3.93	21			
Markville		3.00	20			
Maurepas		5.42	22			
Do.		2.55	25			
Minden	10.44					
Monroe	10.63					
New Iberia		3.65	21			
Do.		2.65	25			
New Orleans	10.44	7.49	21-22	2.90	2 00	21
Do.				1.06	1 00	22
North Louisiana Experimental Station	10.06					
Paincourtville		4.89	21			
Do.		3.10	25			
Plaquemine	10.93	4.40	21			
Do.		3.03	24			
Roseland		3.99	21			
Do.		2.89	24			
Shreveport		2.98	19-20			
Sugar Experimental Station	11.75	8.12	21-22			
Thibodeaux		3.27	21			
Wallace	11.20	6.75	21			
West End		6.80	21-22			
Michigan.						
Birmingham		3.36	4-5			
Mississippi.						
Agricultural College		5.87	4-6			
Batesville		2.75	6-7			
Bay Saint Louis	14.30	9.60	21-22			
Booneville	14.99	3.25	2			
Do.		3.00	4			
Do.		3.00	6			
Brookhaven		2.80	21			
Columbus		5.40	6-7			
Greenville		3.81	6-7			
Kosciusko	12.60	5.80	6			
Logtown		4.52	21	4.52	4 00	21
Louisville		3.80	6			
Moss Point		4.22	20			
Palo Alto		7.81	6-7			
Pontotoc	10.13	2.90	1-2			
Ship Island		7.48	21-22			
University	10.67	4.36	1-2			
Vaiden	13.72	9.92	4-6			
Water Valley		2.92	2			
Yazoo City	11.23	3.39	6-7			
Missouri.						
Adrian		3.40	3	2.40	1 00	3
Carrollton		3.50	3-4			
Darksville		3.90	3			
East Lynne		2.81	3-4			
Forest Park		2.66	3-4			
Lamonte		2.66	3-4			
Mansfield		3.10	3-4			
Marshall		2.60	4			
Mine La Motte		4.10	3			
Pickering		2.79	30			
Rolla		2.60	3-4			
Saint Louis		2.52	3-4			
Shelbina		3.50	3-4			
Zeitonia		4.09	3-4	2.25	1 00	4
North Carolina.						
Horse Cove		2.56	6			
Louisburgh		2.52	21-22			
Murphy		3.91	5-6			
Raleigh				1.05	0 35	22
Oklahoma.						
Stillwater				1.86	1 45	27
Oregon.						
Astoria	10.27					
Gardiner	10.27					
Glenora	17.20	3.70	24			
Langlois	14.92					
South Dakota.						
Aberdeen		3.45	4			
Oelrichs		3.57	3			
Saint Lawrence		3.95	4			
Spearfish		2.50	3-4			
Wolsey		2.75	4-5	1.38	0 30	25-26
Tennessee.						
Arlington		4.64	20-21			
Ashwood	11.13					
Bethel Springs		2.54	3			
Brownsville		2.84	19-20			
Charleston		4.60	5-6			
Chattanooga		2.96	5-6			
Clarksville		3.53	19-20			
Columbia	10.50					
Covington		2.60	20			
Dunlap	10.35	4.27	6			
Dyersburg	10.45	3.58	19			
Fayetteville	11.44	4.14	5-6			
Hohenwald	10.34					
Jackson		2.90	20			
Johnsonville	12.29	3.82	20-21			

Table of excessive precipitation—Continued.

State and station.	Monthly rainfall in inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall 1 inch, or more, in one hour.		
		Amt.	Day.	Amt.	Time.	Day.
<i>Tennessee—Continued.</i>						
Knoxville	<i>Inches.</i>	<i>Inches.</i>		<i>Inches</i>	<i>h. m.</i>	
Loudon	10.96	2.51	5-6			
Lynnville	13.75	3.55	5-6			
McKenzie		2.65	7			
McMinnville		2.50	20			
Memphis	10.05					
Rockwood		3.54	20			
Savannah		2.60	5-6			
Sharp	12.37					
Springdale	12.46	2.89	10-11			
Waynesborough		3.85	7			
	10.95	2.60	2			
<i>Texas.</i>						
Brasoria				1.70	0 55	29
Brownwood				1.24	1 00	29
Gainesville		2.90	18			29
Houston				1.80	1 30	29
<i>Washington.</i>						
Aberdeen	10.84					
Neah Bay	11.00					

MAXIMUM RAINFALL IN ONE HOUR OR LESS.

The following table is a record of the heaviest rainfall during April, 1892, for periods of five and ten minutes and one hour, as reported by regular stations of the Weather Bureau furnished with self-registering gauges:

Station.	Maximum fall in—					
	5 min.	Date.	10 min.	Date.	1 hour.	Date.
Atlanta, Ga.	Inch.		Inch.		Inch.	
Bismarck, N. Dak.	0.30	7	0.55	7	0.92	7
Boston, Mass.	0.08	26	0.12	26	0.31	26
Buffalo, N. Y.						
Cincinnati, Ohio	0.10	2, 3	0.15	2, 3	0.40	2
Chicago, Ill.	0.13	3	0.15	3	0.24	4
Cleveland, Ohio	0.05	3	0.07	3	0.23	3
Denver, Colo.	0.03	18	0.05	18	0.20	18
Detroit, Mich.	0.15	5	0.22	5	0.28	5
Dodge City, Kans.						
Duluth, Minn.						
Eastport, Me.	0.02	23	0.04	23	0.16	23
Galveston, Tex.	0.20	25	0.30	25	0.75	25
Indianapolis, Ind.	0.27	28	0.48	28	0.90	28
Jacksonville, Fla.	0.03	7	0.05	7	0.09	7
Jupiter, Fla.	0.10	14	0.11	14	0.30	14
Kansas City, Mo.	0.25	17	0.45	17	0.50	17
Key West, Fla.	0.20	27	0.25	27	0.32	27
Marquette, Mich.	0.06	1	0.11	1	0.25	1
Memphis, Tenn.	0.30	20	0.50	20	0.75	20
Milwaukee, Wis.	0.12	27	0.14	27	0.35	27
New York, N. Y.						
New Orleans, La.	0.20	21	0.32	21	1.70	21
Norfolk, Va.	0.20	22	0.25	22	0.85	22
Philadelphia, Pa.	0.02	14, 22	0.04	14, 22	0.15	22
Philadelphia Water Works	0.02	22	0.03	22	0.15	22
Pittsburg, Pa.						
Portland, Oregon	0.03	24	0.05	24	0.25	24
Saint Louis, Mo.						
Saint Paul, Minn.						
Salt Lake City, Utah	0.03	12	0.05	12	0.15	12
San Diego, Cal.	0.01	3	0.02	3	0.10	3
San Francisco, Cal.						
Savannah, Ga.	0.15	22	0.20	22	0.35	22
Washington, D. C.	0.08	14	0.11	14	0.20	7
Wilmington, N. C.						

*Self-register out of order.

† Less than 0.05 in 1 hour.

The following tables show the number of years for which monthly precipitation to equal or exceed 10.00 inches, daily precipitation to equal or exceed 2.50 inches, and hourly precipitation to equal or exceed 1.00 inch has been reported in the several states and territories for April during the last 22 years:

Excessive monthly precipitation.

State.	No. years noted.	State.	No. years noted.
Louisiana	11	Texas	6
Mississippi	11	Georgia	5
Arkansas	9	Illinois	3
North Carolina	8	Indiana	3
Alabama	8	Kansas	3
Tennessee	7	Virginia	3

Excessive monthly precipitation—Continued.

State.	No. years noted.	State.	No. years noted.
Florida	2	Vermont	1
Kentucky	2	Wisconsin	1
Maryland	2	Arizona	0
New Hampshire	2	California	0
New Jersey	2	Delaware	0
Oregon	2	District of Columbia	0
Washington	2	Idaho	0
Ohio	2	Iowa	0
South Carolina	2	Maine	0
Colorado	1	Minnesota	0
Connecticut	1	Montana	0
Indian Territory	1	Nevada	0
Massachusetts	1	New Mexico	0
Michigan	1	Rhode Island	0
Missouri	1	The Dakotas	0
Nebraska	1	Utah	0
New York	1	West Virginia	0
Pennsylvania	1	Wyoming	0

Excessive daily precipitation (24 hours).

State.	No. years noted.	State.	No. years noted.
Louisiana	15	Pennsylvania	3
Texas	15	Colorado	2
Alabama	14	Massachusetts	2
Arkansas	14	Minnesota	2
Georgia	14	Oregon	2
Tennessee	14	Vermont	2
Mississippi	15	Wisconsin	2
North Carolina	15	Maine	1
Florida	16	Michigan	1
Kansas	16	Montana	1
The Dakotas	9	New Jersey	1
Illinois	20	New Mexico	1
Indian Territory	8	Ohio	1
Indiana	6	Rhode Island	1
Iowa	6	Wyoming	1
Kentucky	6	Arizona	1
Missouri	6	Delaware	0
Nebraska	5	District of Columbia	0
California	4	Idaho	0
Maryland	4	Nevada	0
South Carolina	4	New Hampshire	0
Virginia	4	Utah	0
Connecticut	3	Washington	0
New York	3	West Virginia	0

Excessive hourly precipitation.

State.	No. years noted.	State.	No. years noted.
Texas	11	California	0
Arkansas	5	Colorado	0
Florida	4	Connecticut	0
Kansas	4	Delaware	0
Tennessee	4	District of Columbia	0
Illinois	4	Idaho	0
Iowa	4	Indiana	0
North Carolina	4	Kentucky	0
Alabama	3	Maine	0
Georgia	3	Massachusetts	0
Louisiana	3	Minnesota	0
Mississippi	3	Montana	0
Missouri	3	Nevada	0
South Carolina	2	New Hampshire	0
The Dakotas	2	New York	0
Indian Territory	1	Oregon	0
Maryland	1	Rhode Island	0
Michigan	1	Utah	0
Nebraska	1	Vermont	0
New Jersey	1	Virginia	0
New Mexico	1	Washington	0
Ohio	1	West Virginia	0
Pennsylvania	1	Wisconsin	0
Arizona	0	Wyoming	0

The following tables give exceptionally heavy monthly, daily, and hourly precipitation reported for April during the last 22 years:

Monthly.

Station and state.	Am't.	Year.	Station and state.	Am't.	Year.
Summit, Cal.	Inches.		Mount Washington, N. H.	Inches.	
Jackson, Miss.	30.40	1880	Newport, Ark.	23.41	1878
Paulding, Miss.	23.80	1874	Brookhaven, Miss.	21.20	1886
	23.60	1871		20.35	1876

Daily (24 hours).

Station and state.	Amount.	Date.	Station and state.	Amount.	Date.
	Inches.			Inches.	
Terrell, Tex.	18.00	22-24, 1879	Point Pleasant, La.	6.02	2, 1885
Mount St. Helena, Cal.	14.70	30-31, 1880	Hammond, La.	5.98	21-23, 1892
Point Pleasant, La.	12.28	5, 1885	Montgomery, Ala.	5.97	2, 1876
Fort Smith, Ark.	11.00	23, 1879	Healdton, Ind. T.	5.97	28, 1892
Vaiden, Miss.	9.92	4-6, 1892	Baton Rouge, La.	5.97	21-23, 1892
Healdsburg, Cal.	9.73	20-21, 1880	Julian, Cal.	5.92	1-2, 1892
Bay Saint Louis, Miss.	9.60	21-22, 1892	New Haven, Conn.	5.90	3-4, 1876
New Orleans, La.	9.23	7-8, 1883	Baltimore, Md.	5.82	25-26, 1889
Fayette, Miss.	9.00	15-16, 1880	Kosciusko, Miss.	5.80	6, 1892
Florence, Ala.	8.71	5-7, 1892	Columbia, La.	5.75	3, 1890
Sugar Ex. Station, La.	8.12	21-22, 1892	Saint Marys, Ga.	5.70	3-3, 1876
Gallinas, Tex.	8.12	20-21, 1891	Jasper, Ga.	5.69	5-6, 1892
Melissa, Tex.	8.00	22-23, 1879	Adamsville, Ga.	5.63	5-6, 1892
Palo Alto, Miss.	7.81	6-7, 1892	Colorado, Tex.	5.60	23, 1890
Austin, Mo.	7.50	8-9, 1891	Diamond, Ga.	5.58	6, 1892
New Orleans, La.	7.49	21-22, 1892	Scottsboro, Ala.	5.55	5, 1892
Ship Island, Miss.	7.45	21-22, 1892	Kendall Green, D. C.	5.54	25-26, 1889
Brookhaven, Miss.	7.45	17-19, 1874	Rome, Ga.	5.54	5-6, 1892
Gadsden, Ala.	7.43	5-7, 1892	New Orleans, La.	5.51	7, 1876
Point Pleasant, La.	7.35	6-7, 1883	Abingdon, Ill.	5.50	13, 1876
Santa Maria, Tex.	7.34	19-20, 1888	Clarksville, Tex.	5.50	22-23, 1879
Mobile, Ala.	7.30	19, 1888	Washington B'ks, D. C.	5.45	24-25, 1889
Modesto, Cal.	7.00	20-21, 1880	Maurepas, La.	5.42	22, 1892
Jordan Grove, Ill.	7.00	3-4, 1892	Gainesville, Tex.	5.40	24, 1890
Pana, Ill.	7.00	3-4, 1892	Columbus, Miss.	5.40	6-7, 1892
Shell Beach, La.	7.00	21, 1890	Mobile, Ala.	5.34	24, 1881
Valley Head, Ala.	6.89	5-6, 1892	Fort Myer, Va.	5.30	25-27, 1889
Helena, Ark.	6.85	22-23, 1879	Sacramento, Cal.	5.28	20, 1880
Tusculum, Ala.	6.84	4-5, 1892	Nevada City, Cal.	5.20	21, 1880
West End, La.	6.80	21-22, 1892	Gallinas, Tex.	5.20	17, 1891
Marengo, Ind.	6.77	22, 1887	Norfolk, Va.	5.19	16-17, 1883
Wallace, La.	6.75	21, 1892	Saint Marks, Fla.	5.15	14-15, 1879
Hat Creek, Wyo.	6.74	21-23, 1879	Breckenridge, Minn.	5.12	10-11, 1878
Santa Rosa, Cal.	6.70	20-21, 1880	New Ulm, Tex.	5.12	23-24, 1879
Emile, La.	6.62	21-22, 1892	Charleston, S. C.	5.09	16-17, 1879
Amite City, La.	6.57	22-23, 1890	Nashville, Tenn.	5.04	21-22, 1883
Foust City, Cal.	6.54	20-21, 1880	Elk Falls, Kans.	5.04	20, 1885
Fort Sill, Ind. T.	6.46	21-22, 1879	Tamale, Cal.	5.02	20-21, 1880
Corsicana, Tex.	6.31	22, 1879	Grainfield, Kans.	5.00	27, 1888
Covington, Ga.	6.30	23, 1883	Dallas, Tex.	5.00	27, 1888
Fayetteville, N. C.	6.25	27-28, 1879	Melissa, Tex.	5.00	17, 1877
Marksville, La.	6.25	22, 1890	Weatherford, Tex.	5.00	27-28, 1888
Dardanelle, Ark.	6.20	15-16, 1890	Newport, Ark.	5.00	17, 1886
Charleston, Ill.	6.12	3-4, 1892	Lonoke, Ark.	5.00	3, 1890
Savannah, Ga.	6.11	16-17, 1879	Fort McHenry, Md.	5.00	23-25, 1889

One hour and less.

Station and state.	Amount.	Time.	Date.
	Inches.	A. M.	
Philadelphia, Pa.	0.45	0 05	16, 1891
Memphis, Tenn.	0.35	0 05	15, 1891
Do.	0.30	0 05	20, 1892
Atlanta, Ga.	0.30	0 05	7, 1892
Indianapolis, Ind.	0.27	0 05	28, 1892
Buffalo, N. Y.	0.25	0 05	9, 1890
Kansas City, Mo.	0.25	0 05	17, 1892
New Orleans, La.	0.25	0 05	17, 1890
Dodge City, Kans.	0.25	0 05	15, 1891
Water Works, Philadelphia, Pa.	0.25	0 05	16, 1891
Adrian, Mich.	1.50	0 10	5, 1888
Philadelphia, Pa.	0.67	0 10	16, 1891
Memphis, Tenn.	0.55	0 10	15, 1891
New Orleans, La.	0.53	0 10	17, 1890
Water Works, Philadelphia, Pa.	0.50	0 10	16, 1891
Egg Harbor City, N. J.	1.39	0 15	27, 1890
Jacksonville, Fla.	1.50	0 20	23, 1883
Denmark, Iowa	1.00	0 30	24, 1880
Titusville, Fla.	1.75	0 35	19, 1888
Cabaniss, Ga.	3.00	0 30	1, 1874
Denmark, Iowa	1.87	0 30	8, 1882
Little Rock, Ark.	1.50	0 30	6, 1882
Black Rock, Ark.	3.42	0 40	20, 1892
Pilot Point, Tex.	3.00	0 45	28, 1879
Losier, Tex.	3.50	1 00	11, 1891

* Estimated.

SNOW (in inches and tenths).

On the 1st heavy snow was reported in the Black Hills near Rapid City, S. Dak., and at Deadwood the amount of snow, 12 to 15, was the greatest of the season. On the 3d and 4th a heavy snowstorm prevailed from Colorado and Wyoming to Iowa. At Rapid City, S. Dak., 12 fell, and the snow drifted 4 to 6 feet in depth, causing a suspension of business and traffic. At Sundance, Wyo., 1 foot of snow fell, causing loss of cattle on the ranges. Snow in the Black Hills region of South Dakota until the 8th caused loss of stock. Heavy snow fell in Utah on the 7th, a depth of 3 being noted at Logan. A report from Rapid City, S. Dak., stated that stockmen esti-

mated the loss of cattle resulting from snowstorms during April at 10 per cent., that the melting snow disclosed thousands of dead cattle, and that farm work was several weeks late.

MONTHLY SNOWFALL.

The depth of snowfall for the month, as reported by regular and voluntary observers of the Weather Bureau, is shown on Chart V. The greatest depth of snowfall was reported in the mountains of Colorado, where more than 50.0 fell; the amount exceeded 40 at Central Pacific Railroad stations, on the summit of the Sierra Nevada Mountains, Cal., in west-central Nebraska, and southwestern South Dakota; it was greater than 30.0 at Flagstaff, Ariz., Cokedale, Mont., and Battle Mountain, Nev.; more than 20.0 fell in north-central Idaho, southwestern Oregon, northern Wyoming, northern New Mexico, northwestern Iowa, and south-central Minnesota; and the monthly amount exceeded 10.0 in the mountains of south-central Pennsylvania, in southwestern Wisconsin, central North Dakota, western Kansas, and central Utah. Along the immediate Atlantic coast snow fell as far south as Delaware; in the eastern mountain ranges it was reported as far south as western North Carolina and southern Tennessee. In the central valleys snow was noted to the middle and upper Ohio River, to south-central Illinois, and in southeastern Kansas; in the Rocky Mountain and plateau regions to extreme southeastern Arizona; and in the interior of the Pacific coast states to the 39th parallel.

Snowfall of 5 inches, or more, was reported as follows, and in states and territories where the maximum depth was less than that amount the station reporting the greatest is given: *Alabama*.—Valley Head, 0.4. *Arizona*.—Flagstaff, 33; Chiricahua Mountains, 26; Natural Bridge, 7; Payson, 5. *California*.—Summit, 45; Cisco, 27; Truckee, 19.5; Towles, 19; Sisson, 13; Emigrant Gap, 12; Boca, 11; Fort Bidwell, 8.3; Susanville, 5. *Colorado*.—Breckenridge, 59.5; Ward District, 44; Dillon, 34.5; Saint Cloud, 32.5; Cumbres, 31; Climax and Gold Hill, 28; Castle Rock, 26.6; Le Roy and Stamford, 22.5; Georgetown, 21.8; Moraine, 18.5; Julesburg, 17.2; Amherst, 15.8; Carson, 15; Platoro, 14.5; Twin Lakes and Monte Vista, 14; Crook, 13.4; Glen Eyrie, 13; San Luis, 12.9; Husted, 12.5; Pagoda (near) and Robb, 12; Alamosa, 11.5; Red Cliff and Yuma, 11; Alma, 10; Cope, 9.2; Box Elder, Como (near), and Thon, 9; Apishapa, 8.5; Fort Collins, 8; Magnolia, 7.6; Avoca and Leslie, 7.5; Gaynor, 6.5; Denver, 6.4; Abbott and Fort Collins (near), 6; Dumont, 5.2; Arboles and Sheridan Lake, 5.

Connecticut.—Norwalk (a), 0.2. *District of Columbia*.—Washington, trace. *Iowa*.—Elk City, 22.5; Henrys Lake, 11; Moscow, 6.1; Era, 5.5. *Illinois*.—Lanark, 4. *Indiana*.—Angola, 7.4; Hammond, 6. *Iowa*.—Storm Lake, 22.2; Algona, 18; Larrabee, 17; Hampton, 14; Fayette and Iowa Falls, 12; Alta (a and b), 11; Grundy Centre, 10.5; Bancroft, Carroll, Havelock, and Oskaloosa, 10; Vinton, 8.3; Galva, Osage, and Webster City, 8; Williams, 6.5; Cedar Falls, Hawk Eye, and Logan, 6; Dubuque, 5.5; Blakeville, Charles City, Cresco, and Monticello, 5. *Kansas*.—Wallace (a), 10; Weskan (a), 7. *Kentucky*.—Lexington, 7. *Maine*.—Orono, 0.5. *Maryland*.—Taneytown, 2. *Massachusetts*.—Monroe and Nantucket, 2. *Michigan*.—Mottville, 5.5; Jeddo, 5.

Minnesota.—Rolling Green, 20; Kinbrae, 13; Bingham Lake, 12; Crookston, 10; Saint Charles, 8.5; Camden, 8; Albert Lea, 7; Sheldon, 6.2. *Missouri*.—Oregon (b), 2.8. *Montana*.—Cokedale, 32.5; Choteau, 15; Virginia City, 14; Fort Assinaboine, 7.5. *Nebraska*.—Whitman, 42; Kimball, 29.8; Springview and Long Pine, 27; Alliance, 26; Valentine, 24.4; Gering, 21.8; Fort Sidney, 21; Hayes Centre, 17; Kennedy and Ough, 14.5; Fort Robinson, 14.1; Bassett, 12; Hartington, 11.5; Agee, 11; O'Neill, 10; Oakdale, 5.5. *Nevada*.—Battle Mountain, 35.2; Tuscarora, 12; Mill City, 9.2; Halleck, 8; Winnemucca, 6.2; South Camp and Toano, 5.2; Humboldt, McDermitt, and Palisade, 5. *New Hampshire*.—Plymouth, 2. *New Jersey*.—Moorestown, 0.5.

New Mexico.—Chama, 24; Dulce, 12; Folsom, 10.5; Springer, 6; Monero, 5. *New York*.—Humphrey, 8.6; Oxford, 6; Le Roy and Number Four, 5.5; South Canisteo, 5.3. *North Carolina*.—Horse Cove, trace. *North Dakota*.—Grand Forks, 12.5; Saint John, 12; Bismarck, 10.8; Napoleon, 8.8; Grafton, 8.5; Ellendale, 8.2; White Earth, 7.9; Grand Rapids, 7.5; Gallatin, 6.8; Power, 6.6; Valley City and Wahpeton, 6; Milton and Minto, 5. *Ohio*.—Garrettsville, 4.5. *Oregon*.—Siskiyou, 24; Joseph, 19.1; Happy Valley, 9; Crook, 8.8; Silver Lake and Sparta, 6.5; John Day Junction, 6.3; Beulah, 6. *Pennsylvania*.—Blue Knob, 12.5; Grampian Hills, 6; State College, 5.5. *Rhode Island*.—Kingston (a) and Providence (a), trace.

South Dakota.—Cross, 41.4; Rosebud, 41; Oelrichs, 40; Spearfish, 31; Kimball, 21.7; Fort Meade, 18.4; Wessington Springs, 16.8; Parkston, 15.6; Elkton, 14; Rapid City and Mitchell, 12; Yankton, 11.5; Aberdeen, 11; Forestburg, 10; Alexandria, Clark, and Saint Lawrence, 8; Webster, 7.8; De Smet, 7; Flandreau, 6.3; Faulkton, 6; Salem, 5. *Tennessee*.—Sharp, 5.6. *Texas*.—Kent, 1. *Utah*.—Park City, 13.5; Parowan, 11.5; Nephi, 7; Fort DuChesne, 6.5; Stockton, 5.5. *Vermont*.—Enosburgh Falls, 7. *Virginia*.—Lexington and Spottsville, trace. *Washington*.—Waterville, 2.5. *West Virginia*.—Rowlesburgh, 2. *Wisconsin*.—Viroqua, 10; Hillsborough, 9; Prairie du Chien, 8; Portage, 7; Dodgeville, 6; Baraboo and Beaver Dam, 5. *Wyoming*.—Fort McKinney, 28.5; Fort Washakie, 23.3; Sundance, 18.5; Camp Pilot Butte, 16.5; Evanston, 12.5; Cheyenne, 11.6.

HAIL.

Description of the more severe hailstorms of the month is given under "Local storms." Hail was reported as follows: 1st, Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, New York, North Dakota, South Carolina, South Dakota, Utah, and Wisconsin. 2d, Arkansas, California, Minnesota, Mississippi, Oregon, Utah, and Washington. 3d, Arizona, Arkansas, California, Illinois, Indiana, Indian Territory, Iowa, Kansas, Missouri, Nebraska, Nevada, Ohio, Oklahoma Territory, Pennsylvania, South Dakota, Texas, Utah, Washington, and West Virginia. 4th, Arizona, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, Tennessee, Utah, and Wisconsin. 5th, New York, Pennsylvania, and Wisconsin. 6th, Georgia, Louisiana, Minnesota, Montana, North Dakota, Texas, and Washington. 7th, Colorado, Nebraska, North Carolina, Tennessee, and Washington. 8th, Michigan and Ohio. 9th, Kansas, Maryland, New York, Pennsylvania, and Virginia. 10th, Colorado, Kentucky, Nebraska, Texas, and Washington. 11th, Arkansas, California, and Utah. 12th, Arkansas, Colorado, Nebraska, Nevada, and Oklahoma Territory. 13th, Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Missouri, Nebraska, and Texas. 14th, California, Georgia, Indiana, Kentucky, New Jersey, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, Virginia, Washington, and West Virginia.

15th, California, North Carolina, Oregon, South Carolina, Tennessee, and Washington. 16th, Arizona, California, Montana, Nebraska, and Oregon. 17th, Arkansas, Colorado, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Missouri, Montana, Nebraska, Nevada, Oregon, Utah, Washington, and Wyoming. 18th, Arkansas, Colorado, Illinois, Kentucky, Missouri, Nebraska, Nevada, North Carolina, Oklahoma Territory, Pennsylvania, Tennessee, Texas, Virginia, and Washington. 19th, Arizona, Arkansas, Georgia, Illinois, Indiana, Kansas, Missouri, Nebraska, New Mexico, North Carolina, Oklahoma Territory, Tennessee, Texas, and Washington.

20th, Alabama, Arkansas, Iowa, Kansas, Kentucky, Louisiana, Maryland, Missouri, Nevada, Pennsylvania, Texas, Utah, and Washington. 21st, Arkansas, Illinois, Kansas, Louisiana, Pennsylvania, Texas, and Wisconsin. 22d, Georgia, Kansas, Nevada, North Carolina, Oregon, and Virginia. 23d, Colorado, Louisiana, Montana, North Carolina, Ohio, Oklahoma

Territory, Texas, Utah, and Washington. 24th, Arkansas, California, Louisiana, Missouri, Oklahoma Territory, Oregon, South Dakota, and Texas.

25th, California, Colorado, Louisiana, New Jersey, Oregon, Pennsylvania, Washington, West Virginia, and Wyoming. 26th, Iowa, Minnesota, Missouri, Nebraska, South Dakota, and Wyoming. 27th, Idaho, Indiana, Kansas, Louisiana, Michigan, Missouri, North Dakota, Oklahoma Territory, South Dakota, and Wisconsin. 28th, Connecticut, Indiana, Kansas, Massachusetts, Michigan, Missouri, New Hampshire, New Mexico, New York, Ohio, and Texas. 29th, California, Minnesota, Pennsylvania, South Dakota, and Texas. 30th, California, Iowa, Kansas, Maine, Minnesota, Missouri, Nebraska, Nevada, South Carolina, and Texas.

SLEET.

Sleet was reported as follows: 2d, Alabama. 3d, Alabama, Nebraska, Nevada, and South Dakota. 4th, Alabama and Nebraska. 5th, Texas. 6th, Washington. 8th, Ohio. 9th, Maryland. 10th, Connecticut and Maine. 11th, Connecticut. 13th, Illinois, Iowa, Nebraska, and North Dakota. 14th, New York, Ohio, and Pennsylvania. 15th, Georgia, Massachusetts, and New York. 17th, Nevada. 18th, Colorado, Illinois. Nevada, and Pennsylvania. 19th, Kansas and Nebraska. 20th, Iowa, Kansas, and Pennsylvania. 21st, Iowa and Kansas. 24th, Nebraska and Ohio. 25th, Nevada, Ohio, and Pennsylvania. 26th, Nevada, Ohio, and Utah. 28th, Massachusetts. 29th, Idaho, Pennsylvania, and South Dakota. 30th, Nevada.

WINDS.

The prevailing winds in April, 1892, are shown on Chart II by arrows flying with the wind. In New England, the middle Atlantic states, the lower lake region, on the northeast slope of the Rocky Mountains, over the plateau region, and along the middle Pacific coast they were generally from southwest to northwest; in the south Atlantic states, from southeast to southwest; over the Florida Peninsula, from the southeast; in the Gulf States and the Missouri Valley, from east to south; in the Ohio Valley and Tennessee, from southeast to northeast, except in the upper Ohio Valley, where they were from northwest to north; in the upper lake region and the extreme northwest, from north to east; in the upper Mississippi valley, from northeast to southeast; on the middle-eastern and southeastern slopes of the Rocky Mountains, from south to west; on the north Pacific coast, from south to southwest; and on the south Pacific coast, from west to northwest.

HIGH WINDS.
[In miles per hour.]

Wind velocities of 50 miles, or more, per hour were reported at regular stations of the Weather Bureau as follows: 1st, 66, sw., at Leavenworth, Kans.; 64, sw., at Des Moines, Iowa; 64, w., at Amarillo, Tex.; 60, s., at Concordia, Kans.; 60, sw., at Davenport, Iowa; 60, nw., at Kearney, Nebr.; 60, s., at Sioux City, Iowa; 59, se., at Fort Canby, Wash.; 58, nw., at Dodge City, Kans.; 58, nw., at Cheyenne, Wyo.; 56, nw., at Valentine, Nebr.; 54, sw., at Chicago, Ill.; 52, sw., at Kansas City, Mo.; 50, w., at Wichita, Kans. 2d, 60, sw., at Fort Stanton, N. Mex.; 60, s., at Lexington, Ky.; 57, sw., at Port Huron, Mich.; 54, sw., at Chicago, Ill.; 54, sw., at Detroit, Mich.; 52, sw., at Davenport, Iowa. 3d, 64, s., at Amarillo, Tex.; 52, w., at Fort Stanton, N. Mex.; 50, sw., at El Paso, Tex. 4th, 66, s., at Amarillo, Tex.; 54, nw., at Kearney, Nebr.; 52, n., at Valentine, Nebr.; 51, sw., at Leavenworth, Kans.; 50, se., at Lexington, Ky. 5th, 63, sw., at Chicago, Ill.; 60, sw., at Port Huron, Mich.; 60, w., at Toledo, Ohio; 57, sw., at Detroit, Mich.; 52, sw., at Fort Assinaboine, Mont.; 50, sw., at Davenport, Iowa.

8th, 54, n., at Amarillo, Tex. 9th, 50, s., at Fort Canby, Wash. 10th, 54, n., at Amarillo, Tex. 13th, 54, nw., at Kearney, Nebr. 14th, 82, s., at Fort Canby, Wash.; 65, n., at Chicago, Ill.; 54, s., at Tatoosh Island, Wash.; 53, s., at Kitty Hawk, N. C. 15th, 54, ne., at Block Island, R. I. 21st, 60, se., at Lexington, Ky. 24th, 72, se., at Fort Canby, Wash.; 60, sw., at Winnemucca, Nev.; 50, e., at Tatoosh Island, Wash. 26th, 51, se., at Huron, S. Dak.; 50, nw., at North Platte, Nebr. 27th, 62, w., at Huron, S. Dak.; 54, se., at Kearney, Nebr.; 54, w., at Red Wing, Minn.; 52, sw., at Chicago, Ill.; 50, nw., at Saint Vincent, Minn.; 50, nw., at Bismarck, N. Dak. 28th, 68, s., at Fort Canby, Wash.; 65, nw., at Saint Vincent, Minn.; 52, w., at Red Wing, Minn.; 52, e., at Tatoosh Island, Wash. 29th, 62, sw., at Winnemucca, Nev.; 60, s., at Fort Canby, Wash.; 52, ne., at Kitty Hawk, N. C. 30th, 50, sw., at Dodge City, Kans.

LOCAL STORMS.

1st.—High winds and local storms prevailed from Kansas, Nebraska, and Texas to the western lake region. A destructive windstorm continued throughout the day at Cheyenne, Wyo. At Valentine, Nebr., the pressure decreased rapidly, and at 8 a. m. had fallen to 29.16, the lowest noted in 2 years. A thunderstorm, with heavy rain, ended in the early morning. A violent windstorm, with velocity 40 to 58 miles per hour, continued 24 hours, unroofing houses, etc. At North Platte, Nebr., a severe northwest gale prevailed. At Ottawa, Kans., a southwest gale in the early morning damaged property to the extent of about \$1,000. At Lawrence, Kans., the wind maintained a velocity of 70 to 79 miles per hour from 8 a. m. to 2 p. m., and reached a velocity of 90 miles per hour from 11.35 to 11.40 a. m. The estimated damage by high wind at Leavenworth, Kans., was \$50,000. A tornado moved northeast over the west part of Harvey county, Kans., destroying one house and prostrating a large number of trees.

High wind destroyed small buildings at Wakefield, Shields, Seneca, and Manhattan, Kans. At Topeka, Kans., the wind reached a velocity of 84 miles per hour from 11.20 to 11.25 a. m., and continued at the rate of 72 miles per hour until 3 p. m., causing damage of a minor character. The pressure decreased to 29.00 at 8 a. m. at Concordia, Kans., and the wind reached a velocity of 60 miles per hour, causing some damage. No serious damage was reported in southwestern Kansas. At Kansas City, Mo., a destructive gale began 2.20 a. m. and ended 7.05 p. m.; 6 persons were injured, one seriously, and property was destroyed to the value of about \$15,000. At Warrensburg, Mo., a church was blown down and other buildings were damaged. Considerable damage was caused by wind in Monroe county, Mo. Damage of a minor character was caused by high wind at Saint Louis, Mo.

Heavy gales prevailed over Iowa. At Des Moines, Iowa, the pressure was the lowest recorded in 5 years, and the velocity of the wind, 65 miles per hour at 3 p. m., with an extreme velocity of 100 miles per hour at 2.57 p. m., was the highest ever noted at that station. At Davenport, Iowa, a heavy rain and thunder storm occurred from 1.10 to 3.10 p. m., and the wind reached a velocity of 60 miles per hour. Considerable damage was caused by wind at Dubuque and other points in Iowa. At Chicago, Ill., a southeasterly gale continued throughout the day. A thunderstorm from 6.56 to 7.10 p. m. was attended by loss of life and great destruction of property. The wind reached a velocity of 54 miles per hour from the southwest; several buildings were blown down; a 7 story building was blown upon a 2 story tenement, killing at least 6 persons, and injuring many others. The estimated loss to property by the storm was \$40,000.

At Hinesborough, Ill., a tornado moved northeast in a path 200 feet in width at 5.30 p. m., with thunder and lightning and heavy rain after; one person was injured and the damage to property was placed at \$2,000. A second tornado was re-

ported near Hinesborough. At Cairo, Ill., during a thunderstorm in the afternoon, the wind reached a velocity of 48 miles per hour, and an extreme velocity of 60 miles per hour. A thunderstorm, with rain and high wind, occurred at Red Wing, Minn., in the evening. A heavy gale swept over Wisconsin at night.

2d.—A heavy thunderstorm moved northeast over Water Valley, Miss., between 9 and 10 p. m. At Detroit, Mich., a gale set in from the southeast the evening of the 1st, and changed to southwest on the 2d, reaching a velocity of 54 miles per hour at 12.44 p. m.

3d.—Severe storms occurred from Texas and Kansas to Pennsylvania. A heavy thunderstorm moved northeast near Gainesville, Tex., at 10 p. m., in a path 400 to 500 yards in width, destroying property to the value of about \$8,000. The storm had a whirling motion from right to left, and mud was spattered on the east sides of houses. Destructive storms were reported near Saint Jo and at Bellevue, Tex. A tornado was reported at Stillwater, Okla. Southern Kansas was visited by destructive storms in the afternoon. A storm visited Knoxville, Ark., between 4 and 5 p. m., damaging buildings to the extent of \$2,000 to \$5,000. At Liberty, Kans., a tornado moved northeast in a path about 50 feet in width at 2.30 p. m., killing one person and destroying buildings.

A tornado in the form of a black, curling, twisting cloud was observed at Cherryvale, Kans. A wind and hail storm caused considerable damage at Manhattan, Kans. At Altoona, Kans., a thunderstorm, with high southwest wind, continued from 10 a. m. until midnight. Some stock was killed by hail near Garland, Kans. A severe thunder, rain, and hail storm moved north over Columbus, Kans., in the evening; several houses were struck by lightning, and a number of buildings were blown over. Thunderstorms occurred at Kansas City, Mo., in the afternoon and evening. A heavy rainstorm, with high southerly winds, continued at Saint Louis, Mo., from the morning of the 3d to the morning of the 4th. The heavy rain flooded tracks at the Union Depot, and interrupted traffic on the electric street railroads.

Heavy rain was general over Missouri. At Barnett, Mo., a heavy thunder, rain, and hail storm moved northeast at 4 a. m., destroying 2 buildings and unroofing several others. A tornado moved northeast over Kirksville, Mo., at 9.10 p. m., with very heavy rain before, and thunder and lightning. The storm had a whirling motion from right to left; it bounded like a ball, touching the earth at intervals; the path was 150 yards in width, and the damage to property was placed at \$5,000. At 3.40 p. m. a tornado, moving northeast, passed north of Bosworth, Mo., in a path 200 yards in width and 3 miles in length, and destroyed property to the value of \$8,000. A funnel-shaped cloud was reported which seemed to lower to the ground at intervals. When the funnel touched the ground what seemed black smoke appeared. Two horses were killed by lightning near Clinton, Iowa.

Heavy rain fell in Illinois. At Springfield, Ill., a heavy rain and thunder storm continued during the day, flooding streams and washing out railroads in that section. Severe wind, thunder, and rain storms prevailed over Ohio, Kentucky, West Virginia, and western Pennsylvania. At Saint Clairsville, Ohio, a heavy rain and hail storm moved northeast at 4.30 p. m. High wind caused damage near Central City, Ky. Heavy hailstorms caused great damage in West Virginia. A destructive thunder, hail, and wind storm caused about \$10,000 damage at Scottdale, Pa., at 6.30 p. m.; the storm moved northeast.

4th.—A hailstorm damaged fruit at New River, Ariz. Storms caused considerable damage in Arkansas, Kansas, Nebraska, Missouri, Tennessee, Kentucky, Illinois, Ohio, Wisconsin, and Michigan. At Little Rock, Ark., thunderstorms, with heavy showers, occurred at intervals during the morning. At 11.30 a. m. a tornado moved northeast near Carlisle, Ark., with heavy rain after; no thunder and lightning were reported. A whirling, funnel-shaped cloud of a bluish color appeared.

Damage to property estimated at \$1,500. At Pine Bluff, Ark., a very black cloud, with heavy rain, moved northeast at 11.55 a. m. The path of the storm was 50 yards in width, and property was destroyed to the value of \$15,000 to \$20,000.

A tornado, moving north, was reported near Lonoke, Ark., about 11 a. m. The storm had a whirling motion and was attended by heavy rain; the path of destruction was about 200 yards in width, and several persons were injured. From 1 to 3 a. m. a heavy thunderstorm moved northeast near Cove, Ark., prostrating timber. A south to southwest gale prevailed at Leavenworth, Kans., the wind reaching a velocity of 51 miles per hour, and an extreme velocity of 56 miles per hour.

A severe windstorm, blowing at the rate of 52 miles per hour, occurred at Topeka, Kans. At Valentine, Nebr., high north winds, reaching a velocity of 52 miles per hour, prevailed. Snow fell and formed drifts 2 to 6 feet in depth, blockading trains and causing a heavy loss of stock on the ranges. Near Gordon, Nebr., snow drifts were reported 20 feet in depth.

A severe gale from the northwest prevailed at North Platte, Nebr. At Emporia, Kans., buildings were unroofed by high wind; the wind was attended by hail and muddy rain. A severe storm from the southwest passed through the southern part of Cape Girardeau county and the northern part of Perry county, Mo. The storm was heavy over western Tennessee. At Sharon, Tenn., a tornado moved northeast in a path 200 yards in width at 8.30 p. m., with thunder and lightning, hail before, and rain after. A heavy thunderstorm was reported near Dresden, Tenn., at 8.30 p. m.; very heavy rain fell; timber and frail buildings were prostrated in a path 200 yards in width. At Russellville, Ky., a thunderstorm, with very heavy rain, moved northeast at midnight; the path of destruction was 75 yards in width; 3 persons were injured, and the damage to property was placed at \$1,500.

At 4.35 p. m. a tornado, with heavy rain and some hail, moved east of north over Barnhill, Ill., damaging property to the extent of about \$10,000. A heavy thunderstorm, with rain and large hail, moved northeast over Staunton, Ill., at 7 a. m. A hard gale, with rain, caused damage about Palestine, Ill. Destructive local storms occurred in Wisconsin. Near Livingston, Wis., a tornado, with rain, hail, thunder, and lightning, moved northeast in a path 2 to 10 rods in width. The storm had a whirling motion, and debris was thrown north. Destructive storms were also reported at Platteville, Whitewater, Wautoma, and Oconomowoc, Wis. At Palo Alto, Miss., 10.17 inches of rain fell from 4 a. m., 4th, to 5 a. m., 7th, causing great damage to property and stock in that section. At Detroit, Mich., a gale set in the morning of the 4th and continued through the 5th, the wind reaching a velocity of 50 to 60 miles per hour; considerable damage was caused to buildings, trees, etc.

5th.—Severe storms occurred from Tennessee to New York. A heavy thunderstorm occurred at Chattanooga, Tenn., in the evening. At Chicago, Ill., westerly gales prevailed, the maximum wind velocity being 63 miles per hour from the southwest. A whirling storm of small diameter, moving from the southwest, was reported at Chicago about 8 a. m. It leveled everything in its path, including the Illinois State Buildings at the World's Fair Grounds, and caused damage at the Fair Grounds amounting to about \$30,000. High westerly winds, reaching a velocity of 60 miles per hour at 12.10 p. m., prevailed at Toledo, Ohio. At Port Huron, Mich., the wind velocity was 40 to 60 miles per hour from the southwest during the afternoon. A destructive storm moved northeast over Olean, N. Y., at 8.45 p. m., with heavy rain and small hail. A funnel-shaped cloud was observed. The path of destruction was about 100 feet in width. One person was killed, a number of persons were injured, 6 buildings were demolished, 14 damaged, and the estimated value of property destroyed was \$25,000. From the 5th to 7th exceptionally heavy rainfall in Alabama and northern Mississippi resulted in considerable damage to railroad and other property.

7th.—Heavy rain, thunder, and hail storms were reported in Tennessee.

10th.—Destructive hailstorms were reported in central and northeastern Texas.

12-13th.—A heavy wind and snow storm prevailed over Iowa and Dakota.

13th.—A thunderstorm, with heavy rain and hail, moved northeast over Palestine, Tex., in the afternoon. A thunderstorm from the west visited Shreveport, La., in the afternoon; heavy rainfall flooded streets, and some hail fell. Heavy wind, rain, and snow storms prevailed in the West and Northwest.

14th.—Heavy thunder and hail storms occurred from Georgia to Virginia, and rain changing to snow was reported in New Jersey and New York. In Dinwiddie county, Va., a house was blown down and one person killed. Several buildings were destroyed by high wind in Princess Anne county, Va. High wind prevailed on the north Pacific coast. At Fort Canby, Wash., a velocity of 82 miles per hour from the south was reached. At Chicago, Ill., the wind attained a velocity of 65 miles per hour from the north.

17th.—Severe thunder and hail storms occurred in Arkansas and western Missouri. Heavy snow fell in extreme western Nebraska from the 17th to 20th.

18th.—Heavy snow fell in eastern Colorado during the 18th and 19th. Severe thunder, rain, and hail storms occurred on the 18th from northeast Texas to Illinois. At Saint Francis, Ark., a hailstorm lasting 5 minutes occurred in the evening, killing some stock. The hailstones were unusually large, and what appeared rotten wood was found in the center of some of the stones. Remarkably large hailstones also fell at Boyds-ville and Rector, Ark. At Olney, Ill., a house was struck by lightning.

19th.—Severe thunderstorms occurred in Texas, Kansas, Oklahoma Territory, Tennessee, and Georgia. At Wichita, Kans., the City Building was struck by lightning and damaged. A thunderstorm, with high wind, damaged crops about Oklahoma City, Okla. Poultry was killed by hail at Atlanta, Ga.

20th.—Very heavy rain fell in Louisiana, Arkansas, and southern Mississippi. Destructive local storms occurred in Kansas, Arkansas, Louisiana, and Texas. A tornado visited the southern parts of Prairie and Lonoke counties, Ark., in the afternoon, causing great damage to buildings and other property and injuring several persons. Thunder, wind, and hail storms were destructive to property in Upshur, Gregg, and Hunt counties, Tex. A tornado was reported about 9 a. m. in Caddo parish, 12 miles south of Shreveport, La. The storm

crossed the Red River into Bossier parish, destroying buildings, etc., in a path about 400 yards in width. Heavy rain in southern Mississippi seriously interfered with railroad traffic.

21st.—Heavy rain and local storms occurred in southern Louisiana and on the middle Gulf coast. At New Orleans, La., the river front and the parks were flooded to a depth of 3 to 36 inches, and traffic was suspended in the morning. One man was struck and several persons were shocked by lightning. Lightning struck and set fire to the building of the Louisiana Jockey Club; a cotton shed was also struck by lightning. At Abbeville, La., lightning struck in 4 places, and 2 persons were killed by lightning.

24th.—High wind prevailed on the north Pacific coast. A wind, snow, sleet, and rain storm prevailed in the mountains near Carson City, Nev., the wind reaching a velocity of 47 miles per hour in the evening. Heavy rain and thunder storms occurred in Louisiana.

26-27th.—High winds and heavy snow prevailed over Nebraska and the Dakotas, causing loss of young cattle.

27th.—A severe storm prevailed from the Dakotas to Michigan. A thunderstorm of exceptional intensity occurred at Huron, S. Dak., in the early morning. At Duluth, Minn., a heavy thunder and rain storm occurred in the early morning. In the afternoon the wind shifted to southwest, and the ice in the lake began to break up. At Marquette, Mich., ice forced into the harbor by heavy southeast wind interfered with the movement of vessels. During a thunderstorm at Grand Haven, Mich., several houses were struck by lightning. At Saint Vincent, Minn., the pressure decreased rapidly until 4 p. m., and rain changed to snow at 3.45 p. m. In the afternoon the wind backed from northeast to northwest, and in the early morning of the 28th reached a velocity of 65 miles per hour from the northwest, damaging the Great Northern depot. At Fairmount, Ill., a house was struck by lightning.

28th.—An exceptionally heavy rainstorm occurred in the afternoon at Haldton, Ind. T., 5.97 inches of rain falling in 3 hours, damaging crops, etc. At Atlantic City, N. J., the wind veered from south and southwest to northwest and increased in strength; a small sidewheel steamer, in tow by a tug, sank near that station. From the 28th to 30th high winds and snow prevailed at intervals at Sault de Ste. Marie, Mich., detaining and damaging vessels.

30th.—A heavy thunder and rain storm occurred at Crete, Nebr.; 3.82 inches of rain fell in 3 hours and 25 minutes, flooding the lower parts of the town. At Walnut, Ill., a thunderstorm, with heavy rain, occurred in the afternoon; one mile south of that place 3 horses were killed by lightning.

INLAND NAVIGATION.

FLOODS.

In the early part of the month the smaller streams in Illinois, Missouri, and Tennessee rose rapidly and caused considerable damage of a minor nature. On the 4th and 5th the Hudson River was very high at Albany, N. Y., and piers and railroad tracks were submerged. The Mohawk, Genesee, and Black rivers in New York, and streams in Vermont, were very high. From the 6th to 8th the Tennessee River rose rapidly at Knoxville, Tenn. On the 7th rivers and streams in northern Mississippi overflowed their banks, doing much damage to plantations. At Grenada, Miss., the Yallahusha River was reported the highest ever known. At Chattanooga, Tenn., the Tennessee River rose rapidly on the 6th, with drift, and in northern Alabama railroad tracks were flooded; 7th, river rose to 21.8 feet at Chattanooga, a rise of 13.3 feet in 24 hours; 8th, river continued rising and reached 31.6 feet at Chattanooga, and on the 9th became stationary at 5 p. m., after which it subsided.

On the 9th high water in streams in northern Mississippi damaged railroads. Much damage was caused by flood in Alabama. The Coosa River overflowed, inundating large

areas. High water in the Tombigbee River and tributaries submerged farm lands, drowning about 100 persons, and carrying away live stock in east-central Mississippi. On the 13th the Tombigbee River rose very rapidly at Demopolis, Ala., flooding railroads, carrying away bridges, etc. On the 10th the Red River of the North reached a stage 30 feet above low-water mark at Saint Vincent, Minn., overflowing its banks. High water in the Illinois River flooded large tracts of farm land about Beardstown, Ill. Streams in Arkansas were rising rapidly.

On the 6th the Mississippi River reached the danger-line, 40 feet, at Cairo, Ill.; on the 11th it reached 45.8 feet, and then fell steadily to 43.9 feet on the 20th, when it began to rise, and reached 48.3 feet on the 28th; it remained nearly stationary until the 30th, and then fell slowly. At Memphis, Tenn., the river passed the danger-line, 33 feet, on the 14th; rose slowly to 34.3 feet on the 22d; fell to 34.2 feet on the 23d and to 34.1 feet on the 26th; and rose to 34.5 feet, 1.5 foot above the danger-line, on the 30th. At Vicksburg, Miss., the river passed the danger-line, 41 feet, on the 14th, and rose

steadily to 47.2 feet at the close of the month. At New Orleans, La., the river reached the danger-line, 13 feet, on the 5th; fell to 12.8 feet on the 7th; rose to 15.5 feet on the 22d; fell to 15.4 feet on the 23d; rose to 15.9 feet on the 25th; fell to 15.8 feet on the 26th; and rose to 16 feet on the 28th to 30th.

At the close of the month the Mississippi River was above the danger-line from Cairo to the Gulf. It was falling slowly at Cairo and rising slowly from Memphis southward. The important levees of the lower Mississippi were holding firm, the only important crevasse reported having occurred at La Blanches on the Bayou La Fourche. At that place a schoolhouse was swept away and a number of children narrowly escaped drowning.

ICE IN LAKES AND RIVERS AND OPENING OF NAVIGATION.

A report from Laconia, N. H., stated that Lakes Winipegsee and Winnesquam were clear of ice on the 12th, and that the break up of ice this season was the earliest in 20 years. Lake Champlain was clear of ice at Burlington, Vt., on the 7th. Navigation was opened at Oswego, N. Y., on the 5th, and Lake Ontario was reported clear of ice. Navigation opened at Buffalo, N. Y., on the 7th, at Erie, Pa., on the 3d, and at Sandusky, Ohio, on the 11th. The first boat of the season cleared from Alpena, Mich., on the 6th, and the first arrival of the season was reported on the 10th. The first boat of the season from Detroit arrived at Port Huron, Mich., on the 2d, and a steamer cleared for Lake Huron ports. The first boat of the season from Alpena arrived at Port Huron, Mich., on the 7th.

Reports from Sault de Ste. Marie, Mich., state that on the 3d the ice was rapidly disappearing from the Saint Marys River and that the channel was open; 5th to 8th, heavy floating ice in the river; 11th, ferryboats began making regular trips; 15th, floating ice in river, and an ice gorge reported at Point Iroquois; 16th to 19th, heavy floating ice in river; 22d, steamers arrived from Duluth, Minn.; 24th, ice formed, and boats detained by floating ice; 25th, ice gorge from Point Iroquois to Waiski Bay detained boats; 30th, ice gorge at Point Iroquois broke, and river full of heavy floating ice.

The first boat of the season from Chicago to Buffalo passed Detroit, Mich., on the 11th. At Duluth, Minn., navigation was reported opened on the 20th, and on the 22d four vessels, the first of the season, arrived. Navigation was opened at Marquette, Mich., on the 21st. Ice passed out of Lake Winnebago, Wis., on the 1st. The first boats of the season from Buffalo, N. Y., arrived at Milwaukee, Wis., on the 15th. Navigation was opened on Lake Michigan at Chicago, Ill., on the 4th. Navigation was opened at Green Bay, Wis., on the 11th.

Ice broke up in the Penobscot River from Bangor to the sea on the 4th. Navigation on the lower Hudson River was open on the 4th. Navigation opened on the Susquehanna River at Wilkes Barre, Pa., on the 1st.

Mississippi River.—Lake Pepin was clear of ice on the 3d. The first boat of the season for up river ports passed Red Wing, Minn., on the 7th, opening navigation at an unusually early date. The first boat of the season from Saint Louis, Mo., arrived at Saint Paul, Minn., on the 21st.

Missouri River.—On the 1st ice was moving slowly at Fort Buford, N. Dak., and on the 2d the river was gorged with ice below that point. At Pierre, S. Dak., large quantities of ice began running on the 5th. On the 29th navigation was opened by the arrival of a steamer from up the river. The first boat of the season from Saint Louis, Mo., arrived at Kansas City, Mo., on the 2d.

STAGE OF WATER IN RIVERS.

In the following table are shown the danger-points at the various river stations; the highest and lowest stages for the month, with the dates of occurrence, and the monthly ranges:

Heights of rivers above low-water mark, April, 1892 (in feet and tenths).

Stations.	Danger-point on gauge.	Highest water.		Lowest water.		Monthly range.
		Date.	Height.	Date.	Height.	
<i>Red River.</i>						
Shreveport, La.	29.9	21	20.3	1	16.3	4.0
<i>Arkansas River.</i>						
Fort Smith, Ark.	22.0	8	16.1	21	5.8	10.3
Little Rock, Ark.	23.0	9, 10	20.0	20	8.7	11.3
<i>Missouri River.</i>						
Fort Buford, N. Dak.		23, 28	6.8	19	5.4	1.4
Pierre, S. Dak.	14.0	8	4.4	26, 28	1.3	3.1
Sioux City, Iowa	18.7	11	10.7	23	7.9	2.8
Omaha, Nebr.	18.0	12	10.6	26	8.5	2.1
Kansas City, Mo.	21.0	15	15.5	30	12.8	2.7
<i>Mississippi River.</i>						
Saint Paul, Minn.	14.0	3, 4	5.7	25	3.1	2.6
La Crosse, Wis.	11.8	11, 12	7.3	1	3.1	4.2
Dubuque, Iowa	16.0	18	10.5	1, 2	4.9	5.6
Davenport, Iowa	15.0	19, 20, 21	7.4	1	3.5	3.9
Keokuk, Iowa	14.0	22	9.7	2	4.8	4.9
Hannibal, Mo.	17.0	6	12.6	3	6.3	6.3
Saint Louis, Mo.	30.0	7, 8	26.8	1	17.4	9.4
Cairo, Ill.	40.0	28	48.3	1	33.9	14.4
Memphis, Tenn.	33.0	30	34.5	1	24.3	10.2
Vicksburg, Miss.	41.0	30	47.2	1	32.9	14.3
New Orleans, La.	13.0	28, 29, 30	16.0	1	11.7	4.3
<i>Ohio River.</i>						
Parkersburg, W. Va.	38.0	7	17.6	30	8.4	9.2
Cincinnati, Ohio.	45.0	25	43.8	18	20.5	23.3
Louisville, Ky.	24.0	23	22.1	18	9.3	12.8
<i>Cumberland River.</i>						
Nashville, Tenn.	40.0	26	38.8	18	12.8	26.0
<i>Tennessee River.</i>						
Chattanooga, Tenn.	33.0	10	34.3	5	6.5	27.8
Knoxville, Tenn.	29.0					
<i>Monongahela River.</i>						
Pittsburg, Pa.	29.0	24	12.5	30	4.0	8.5
<i>Savannah River.</i>						
Augusta, Ga.	32.0	9	25.5	30	8.6	16.9
<i>Willamette River.</i>						
Portland, Oregon.	15.0	28, 29	7.5	5	5.0	2.5
<i>Susquehanna River.</i>						
Harrisburg, Pa.	17.0	6	14.8	30	3.2	11.6
<i>Alabama River.</i>						
Montgomery, Ala.	48.0	11	39.9	30	7.0	32.9

* For 15 days.

ATMOSPHERIC ELECTRICITY.

THUNDERSTORMS.

Description of the more severe thunderstorms reported for the month is given under "Local storms."

Thunderstorms were reported as follows: East of the Rocky Mountains they were reported in the greatest number of states, 23, on the 4th; in 20 on the 3d and 20th; in 15 to 19 on the 1st, 5th, 13th, 14th, 18th, 19th, 22d, 27th, and 28th; in 10 to 14 on the 2d, 6th, 7th, 17th, 21st, 23d to 26th, 29th, and 30th; in 5 to 9 on the 10th, 12th, 15th, and 16th; and in 4 on the 8th, 9th, and 11th. There was no date for which thunderstorms were not reported east of the Rocky Mountains.

East of the Rocky Mountains thunderstorms were reported on the greatest number of dates, 25, in Kansas; on 21 in Illinois; on 15 to 20 in Arkansas, Iowa, Louisiana, Mississippi, Missouri, Nebraska, South Dakota, Tennessee, and Texas; on

10 to 14 in Alabama, Georgia, Indiana, Kentucky, Michigan, New York, North Carolina, Ohio, Oklahoma Territory, South Carolina, and Virginia; on 5 to 9 in Florida, Indian Territory, Maryland, Minnesota, Montana, North Dakota, Pennsylvania, West Virginia, and Wisconsin; and on 1 to 4 in Connecticut, District of Columbia, Massachusetts, New Jersey, and Vermont.

West of the Rocky Mountains thunderstorms were reported in California on the 2d, 11th, 14th, 16th, and 30th; in Colorado on the 3d, 4th, 7th, 9th to 12th, 14th, 17th, 18th, 19th, 21st, 23d, 24th, and 25th; in Nevada on the 6th and 22d; in New Mexico on the 19th and 20th; in Oregon on the 29th; in Utah on the 15th, 16th, 18th, 22d, 23d, and 24th; in Washington on the 5th, 17th, and 29th; and in Wyoming on the 16th, 17th, 25th, and 26th. In states and territories other than those named no thunderstorms were reported.

AURORAS.

Brilliant auroral displays were observed generally from Maine to Washington and southward over Pennsylvania, the Ohio Valley, and eastern Colorado on the 25th, and from Maine to Montana and in the Ohio and Missouri Valleys on the 26th. Notable auroras were also noted as follows: 23d, New Hampshire, Vermont, Michigan, and in the upper Mississippi and Missouri valleys. 24th, New Hampshire, Vermont, and upper Mississippi valley. 23d to 26th and 29th and 30th in New England. 27th, 28th, and 29th in Maryland. 23d, 28th, and 29th in the Missouri and upper Mississippi valleys. The more prominent features of the more important displays are shown in the following table:

Auroral displays of April, 1892.

Date.	Station.	Extent of display.		Remarks.
		Azimuth.	Altitude.	
20	Manchester, N. H.	145 to 270	35	Faint, slender arch.
23	do .....	.....	45	Diffused yellow light.
23	Northfield, Vt.	135 to 225	20	.....
23	Boston, Mass.	Cov'd 140	30	Arch of white light, with streamers.
23	Marquette, Mich.	135 to 225	90	Two arches, with streamers.
24	Manchester, N. H.	145 to 210	20	Arch of diffused yellow and green.
24	Northfield, Vt. ....	.....	25	Pale yellow arch, with streamers.
25	Eastport, Me. ....	.....	25	Brilliant arch, with luminous beams.
25	Manchester, N. H.	145 to 210	20	Streamers to zenith. At times display appeared like a waving curtain.
25	Northfield, Vt.	145 to 200	30	An arch, with waves of light.

Auroral displays of April, 1892—Continued.

Date.	Station.	Extent of display.		Remarks.
		Azimuth.	Altitude.	
25	Boston, Mass. ....	.....	n'r zenith	Cloud-like appearance near and south of zenith.
25	North Billerica, Mass. ..	In the n.	Zenith	Very brilliant, with "merry dancers."
25	Woods Holl, Mass.	140 to 220	45	Well-defined vertical bands.
25-26	Buffalo, N. Y. ....	.....	40	Arch, with streamers and wavy motion from east to west.
25	Oswego, N. Y. ....	.....	30	Double arch.
25	Wedgwood, N. Y.	120 to 265	Zenith	Streamers and curtains of white light.
25	Erie, Pa.	In the n.	10	Double arch.
25	Marquette, Mich. ....	.....	75	Arch of pale green, with streamers to zenith.
25-26	Fort Buford, N. Dak. ...	In nw., ne.	10	Diffused blue light, with "merry dancers."
25	Fort Assinaboine, Mont	Cov'd 180	90	Very brilliant.
25-26	Helena, Mont.	Cov'd 120	25	Whitish arch, with streamers.
25	Miles City, Mont.	40 to 120	30	Two arches, with luminous clouds to zenith.
25	Colorado Springs, Colo. ....	.....	30	Arch of varying height. Green lower part and rosy at summit, with white streamers.
26	Eastport, Me. ....	.....	30	Arch, with rose colored beams.
26	Manchester, N. H.	In the n.	30	Slender beams to altitude 70° to 80°.
26	Northfield, Vt.	In the n.	45	Pale yellow arch, with streamers.
26	New Haven, Conn.	Cov'd 90	30	Whitish arch, with streamers of greenish color.
26	Oswego, N. Y. ....	.....	35	Three arches and "merry dancers."
27-28	Marquette, Mich.	180 to 225	10	Pale green arch.
29	Alpena, Mich. ....	.....	10	Arch of pale straw color.
30	Eastport, Me. ....	.....	25	Luminous beams.
30	Oswego, N. Y.	135 to 225	20	Irregular arch.
30	New Whatcom, Wash. ....	.....	80	Arch.

MISCELLANEOUS PHENOMENA.

DROUGHT.

In Florida the month was exceptionally dry. Oranges and small fruits were greatly damaged, and the oat crop was reported a complete failure. A very severe drought prevailed in southern and extreme western Texas. Corn and cotton seed failed to germinate, garden vegetables were a failure, and the outlook for wheat and oats was poor. Owing to absence of grass and water a great loss of live stock occurred. Continued

dry weather and hot winds, with heavy duststorms, severely injured vegetation about Fort Stanton, N. Mex. Grass on the ranges was backward and a great loss of live stock was reported. The month was very dry generally over Oklahoma Territory. Drought conditions were reported in the Hudson Valley about Albany, N. Y., on the 19th. At Blue Hill Observatory, Mass., the rainfall was the least ever noted, 0.10 inch, only, being recorded from March 24th to April 21st. The month was unusually dry in parts of New Hampshire.

STATE WEATHER SERVICES.

[Temperature in degrees Fahrenheit; precipitation, including melted snow, in inches and hundredths.]

The following extracts and summaries are republished from reports for April, 1892, of the directors of the various state weather services:

ALABAMA.

Temperature.—The mean was 1.3 above the normal; maximum, 91, at Wiggins, 30th; minimum, 29, at Mountain Home, 9th; greatest monthly range, 59, at Mountain Home; least monthly range, 33, at Pittsboro.

Precipitation.—The average was 0.17 below the normal; greatest monthly, 14.78, at Florence; least monthly, 0.00, at Pittsboro.

Wind.—Prevailing direction, southeast.—P. H. Mell, Observer, Weather Bureau, Auburn, director.

ARIZONA.

Temperature.—The mean was below the normal; maximum, 101, at Fort Mohave, 10th; minimum, 12, at Flagstaff, 20th; greatest monthly range, 68, at Fort Mohave; least monthly range, 38, at Gila Bend.

Precipitation.—The average was about normal; greatest monthly, 3.33, at Flagstaff; least monthly, 0.00, at Oro, Teviston, and Tombstone.

Wind.—Prevailing direction, west.—J. C. Hayden, Observer, Weather Bureau, Tucson, director.

ARKANSAS.

Temperature.—The mean was 1.3 below the normal; maximum, 97, at Keesees Ferry, 18th; minimum, 27, at Dallas, 22d; greatest monthly range, 66, at Keesees Ferry; least monthly range, 34, at Washington.

Precipitation.—The average was 2.53 above the normal; greatest monthly, 11.06, at Gaines Landing; least monthly, 3.35, at Mount Nebo.

Wind.—Prevailing direction, south.—M. F. Locke, Commissioner of Agriculture, Little Rock, director; F. H. Clarke, Observer, Weather Bureau, assistant.

CALIFORNIA.

Temperature.—The mean was 2.7 below the normal; maximum, 96, at Needles, 9th; minimum, 24, at Fort Jones (near), 17th; greatest monthly range, 60, at Riverside; least monthly range, 28, at Salinas.

Precipitation.—The average was 0.28 below the normal; greatest monthly, 9.54, at Upper Mattole; least monthly, 0.00, at Independence.

Wind.—Prevailing directions, west and southwest.—J. A. Barwick, Observer, Weather Bureau, Sacramento, director.

COLORADO.

Temperature.—The mean was 2.5 below the normal; maximum, 90, at Lamar and Robb, 30th, and at Rocky Ford, 29th; minimum, —9, at Breckenridge, 4th; greatest monthly range, 79, at Breckenridge; least monthly range, 48, at Climax.

Precipitation.—The average was 0.40 below the normal; greatest monthly, 5.95, at Breckenridge; least monthly, 0.02, at Brandon.

Wind.—Prevailing direction, west.—W. S. Miller, Observer, Weather Bureau, Denver, director.

FLORIDA.

The month was remarkable for the prevalence of a drought of unprecedented severity.

Temperature.—Maximum, 90, at Eustis, 30th; minimum, 38, at Green Cove Springs, 16th; greatest monthly range, 50, at Eustis and Fort Meade; least monthly range, 19, at Key West.

Precipitation.—Greatest monthly, 4.44, at Myers; least monthly, 0.10, at Amelia.

Wind.—Prevailing direction, southeast.—*E. R. Demain, Observer, Weather Bureau, Jacksonville, director.*

GEORGIA.

Temperature.—Maximum, 91, at Darien, 8d and 5th, and at Louisville, 19th and 23d; minimum, 29, at Diamond, 10th and 16th; greatest monthly range, 57, at Fleming; least monthly range, 36, at Morgan.

Precipitation.—Greatest monthly, 10.82, at Diamond; least monthly, 0.11, at Fleming.

Wind.—Prevailing direction, southeast.—*Park Morrill, Local Forecast Official, Weather Bureau, Atlanta, director.*

ILLINOIS.

Temperature.—The mean was 2.5 below the normal of the last 17 years; maximum, 87, at McLeansborough, 27th; minimum, 20, at Aurora, 11th.

Precipitation.—The average was 3.32 above the normal; greatest monthly, 11.99, at Pana; least monthly, 2.17, at Chicago.

Wind.—Prevailing direction, northwest.—*John Craig, Observer, Weather Bureau, Springfield, director.*

INDIANA.

Temperature.—The mean was 1.3 below the normal; maximum, 85, at Mount Vernon, 27th; minimum, 15, at Marion, 9th, and at Hammond, 11th; greatest monthly range, 66, at Marion; least monthly range, 46, at Franklin and Hawpach.

Precipitation.—The average was 2.84 above the normal; greatest monthly range, 8.79, at De Gonia Springs; least monthly range, 3.69, at Franklin.

Wind.—Prevailing direction, southwest.—*Prof. H. A. Huston, La Fayette, director; C. F. R. Wappenhans, Local Forecast Official, Weather Bureau, assistant.*

IOWA WEATHER AND CROP SERVICE.

The snows and frequent cold rains during the month have retarded farm work.

Temperature.—The mean was about 3.0 below the normal; maximum, 88, at Sioux City, 30th; minimum, 14, at Cedar Falls, 10th; greatest monthly range, 64, at Galva and Sioux City; least monthly range, 36, at Williams.

Precipitation.—The average was about 2.00 above the normal; greatest monthly, 8.38, at College Springs; least monthly, 2.43, at Blakeville.

Wind.—Prevailing direction, southeast.—*J. R. Sage, Des Moines, director; G. M. Chappel, Local Forecast Official, Weather Bureau, assistant.*

KANSAS.

Temperature.—The mean was 2.8 below the normal; maximum, 96, at Cunningham, 16th; minimum, 18, at Burr Oak and Cunningham, 9th, and at Belleville, 12th; greatest monthly range, 78, at Cunningham; least monthly range, 48, at Wakefield.

Precipitation.—The average was 1.01 below the normal; greatest monthly, 5.30, at Columbus; least monthly, trace, at Ogallah.

Wind.—Prevailing direction, south.—*Prof. J. T. Lovewell, Topeka, director; T. B. Jennings, Observer, Weather Bureau, assistant.*

KENTUCKY.

Temperature.—Maximum, 88, at Pellville, 26th; minimum, 22, at Springfield and Central City, 10th, and at Harrodsburgh, 11th; greatest monthly range, 62, at Harrodsburgh and Pellville; least monthly range, 38, at South Fork.

Precipitation.—The average was about 3.00 above the normal; greatest monthly, 13.25, at South Fork; least monthly, 2.05, at Carrollton.

Wind.—Prevailing direction, northeast.—*Frank Burke, Observer, Weather Bureau, Louisville, director.*

LOUISIANA.

Temperature.—The mean was 0.9 above the normal; maximum, 93, at Liberty Hill, 18th; minimum, 39, at Luling, 10th, and at Baton Rouge, 15th and 17th; greatest monthly range, 53, at Liberty Hill; least monthly range, 23, at Port Eads.

Precipitation.—The average was 2.47 above the normal; greatest monthly, 11.76, at Sugar Experiment Station (Audubon Park); least monthly, 0.58, at Lake Charles.

Wind.—Prevailing direction, southeast.—*George E. Hunt, Local Forecast Official, Weather Bureau, New Orleans, director.*

MARYLAND.

Temperature.—Maximum, 87, at Cumberland (b), 4th; minimum, 23, at Boettcherville, 12th; greatest monthly range, 63, at Boettcherville; least monthly range, 42, at McDonogh.

Precipitation.—Greatest monthly, 6.68, at Barren Creek Springs; least monthly, 2.03, at McDonogh.

Wind.—Prevailing direction, northwest.—*Dr. William B. Clark, Johns Hopkins University, Baltimore, director; Prof. Milton Whitney, Maryland Agricultural College, secretary and treasurer; C. P. Cronk, Observer, Weather Bureau, in charge.*

MICHIGAN.

Temperature.—Maximum, 80, at Benton Harbor, 27th; minimum, 9, at Bellaire and Grayling, 24th; greatest monthly range, 63, at Grayling; least monthly range, 39, at Saint Ignace.

Precipitation.—Greatest monthly, 5.85, at Birmingham; least monthly, 0.41, at Bellaire.

Wind.—Prevailing direction, northwest.—*E. A. Evans, Local Forecast Official, Weather Bureau, Detroit, director.*

MINNESOTA.

Temperature.—Maximum, 73, at Montevideo, 23d; minimum, -2, at Saint Vincent, 28th; greatest monthly range, 69, at Saint Vincent; least monthly range, 40, at Sheldon.

Precipitation.—Greatest monthly, 6.23, at Rolling Green; least monthly, 0.68, at Minneapolis.

Wind.—Prevailing direction, east.—*J. H. Harmon, Observer, Weather Bureau, Minneapolis, director.*

MISSISSIPPI.

Temperature.—The mean was 1.3 above the normal; maximum, 92, at Vaiden, 19th; minimum, 34, at Louisville, 15th; greatest monthly range, 55, at Louisville; least monthly range, 32, at Bay Saint Louis.

Precipitation.—The average was 1.58 above the normal; greatest monthly, 14.99, at Booneville; least monthly, 2.03, at Meridian.

Wind.—Prevailing direction, south.—*R. B. Fulton, Observer, Weather Bureau, University, director.*

MISSOURI.

The month was remarkable for the excessive number of rainy, cool, and cloudy days.

Temperature.—The mean was about 4.0 below the normal; maximum, 90, at Lamar, 1st; minimum, 17, at Adrian, 8th; greatest monthly range, 66, at Adrian; least monthly range, 43, at Conception.

Precipitation.—The average was 2.50 above the normal; greatest monthly, 8.68, at Gordonville; least monthly, 2.50, at Conception.—*Levi Chubbuck, Secretary of State Board of Agriculture, Columbia, director; J. H. Smith, Observer, Weather Bureau, assistant.*

MONTANA.

Frequent snow flurries retarded farm work, and cold weather injured young stock.

Temperature.—Maximum, 78, at Great Falls, 12th, and at Fort Keogh, 15th; minimum, -2, at Cokedale, 8th; greatest monthly range, 65, at Cokedale; least monthly range, 44 at Choteau.

Precipitation.—Greatest monthly, 2.65, at Fort Buford, N. Dak.; least monthly, trace, at Livingston.

Wind.—Prevailing direction, southwest.—*E. J. Glass, Observer, Weather Bureau, Helena, director.*

NEBRASKA.

Temperature.—Maximum, 98, at Lexington and Grand Island, 30th; minimum, 3, at Lexington, 2d; greatest monthly range, 95, at Lexington; least monthly range, 43, at Falls City.

Precipitation.—Greatest monthly, 8.25, at Plattsmouth; least monthly, 1.29, at Orleans.

Wind.—Prevailing direction, northwest.—*Prof. Goodwin D. Swezey, Crete, director; G. A. Loveland, Observer, Weather Bureau, assistant.*

NEVADA.

The month has been cold and the lack of sunshine has retarded the growth of crops.

Temperature.—The mean was 5.1 below the normal; maximum, 84, at Downeyville, 8th; minimum, 6, at Monitor Ranch, 1st.

Precipitation.—The average was 0.16 below the normal; greatest monthly, 2.17, at McDermitt; least monthly, trace, at Tybo.

Wind.—Prevailing direction, west.—*Prof. Charles W. Friend, Carson City, director; F. A. Carpenter, Observer, Weather Bureau, assistant.*

NEW ENGLAND.

Temperature.—The mean was 1.4 above the normal; maximum, 81, at Lake Cochituate and Taunton (d), 3d; minimum, 4, at Farmington, 12th; greatest monthly range, 71, at Farmington; least monthly range, 29, at Nantucket.

Precipitation.—The average was 2.10 below the normal; greatest monthly, 3.35, at Kingston (a); least monthly, 0.36, at Leicester.

Wind.—Prevailing direction, northwest.—*J. Warren Smith, Observer, Weather Bureau, Boston, Mass., director.*

NEW JERSEY.

Temperature.—The mean was 1.4 above the normal; maximum, 87, at Paterson, 4th; minimum, 19, at Dover, 1st and 17th; greatest monthly range, 65, at Allaire; least monthly range, 48, at Atlantic City and Bridgeton.

Precipitation.—The average was 0.98 below the normal; greatest monthly, 4.41, at Cape May C. H.; least monthly, 1.05, at Pochuck Mountain.

Wind.—Prevailing direction, northwest.—*E. W. McGann, Observer, Weather Bureau, New Brunswick, director.*

NEW MEXICO.

The month was very cool and dry with an unusual amount of wind.

Temperature.—The mean was considerably below the normal; maximum, 90, at Socorro, 25th; minimum, —3, at Chama, 1st; greatest monthly range, 80, at Springer; least monthly range, 50, at La Luz.

Precipitation.—Greatest monthly, 1.76, at Chama; least monthly, 0.00, at Los Lunas.

Wind.—Prevailing direction, west.—*H. B. Hersey, Observer, Weather Bureau, Santa Fe, director.*

NEW YORK.

Temperature.—The mean was 0.2 below the normal; maximum, 82, at Poughkeepsie, 4th; minimum, 10, at Utica, 26th; greatest monthly range, 66, at South Kortright; least monthly range, 45, at Buffalo.

Precipitation.—The average was 1.21 below the normal; greatest monthly, 3.94, at Cherry Creek; least monthly, 0.55, at Alfred Centre.

Wind.—Prevailing direction, northwest.—*Prof. E. A. Fieries, Dean of the College of Civil Engineering, Cornell University, Ithaca, director; R. M. Hardinge, Observer, Weather Bureau, assistant.*

NORTH CAROLINA.

Temperature.—The mean was 1.8 below the normal; maximum, 89, at Marion, 5th; minimum, 22, at Linnville, 3d, and at Mount Airy, Bakersville, and Marion, Va., 11th; greatest monthly range, 64, at Marion; least monthly range, 31, at Hatteras.

Precipitation.—The average was 0.24 above the normal; greatest monthly, 9.88, at Murphy; least monthly, 0.80, at Southport.

Wind.—Prevailing direction, southwest.—*Dr. Herbert B. Battle, Raleigh, director; C. F. von Herrmann, Observer, Weather Bureau, assistant.*

NORTH DAKOTA.

Temperature.—The mean was 2.4 below the normal; maximum, 75, at White Earth, 22d; minimum, —2, at Saint Vincent, Minn., 28th; greatest monthly range, 69, at Saint Vincent, Minn.; least monthly range, 44, at University.

Precipitation.—The average was 0.97 above the normal; greatest monthly, 5.50, at Napoleon, least monthly, 1.00, at Hope.

Wind.—Prevailing direction, northeast.—*W. H. Fallon, Observer, Weather Bureau, Bismarck, director.*

OHIO.

Temperature.—The mean was 1.0 below the normal; maximum, 90, at Portsmouth, 4th and 5th; minimum, 14, at Weymouth, 19th; greatest monthly range, 70, at Portsmouth; least monthly range, 44, at Greenville.

Precipitation.—The average was 0.44 above the normal; greatest monthly, 5.68, at Springborough; least monthly, 1.20, at Youngstown.

Wind.—Prevailing direction, northwest.—*Prof. B. F. Thomas, Columbus, director; C. M. Strong, Observer, Weather Bureau, secretary and assistant.*

OKLAHOMA.

Temperature.—Maximum, 98, at Purcell, 18th; minimum, 23, at Gate City, 9th; greatest monthly range, 72, at Gate City; least monthly range, 44, at Healdton.

Precipitation.—Greatest monthly, 7.20, at Healdton; least monthly, 0.13, at Buffalo.

Wind.—Prevailing direction, south.—*Louis Dorman, Observer, Weather Bureau, Oklahoma City, director.*

OREGON.

The month was unusually cold and wet.

Temperature.—The mean was 4.0 below the normal; maximum, 78, at Salem, 20th; minimum, 14, at Silver Lake, 28th; greatest monthly range, 59, at Silver Lake; least monthly range, 23, at Hood River.

Precipitation.—The average was 2.08 above the normal; greatest monthly, 17.20, at Glenora; least monthly, 0.25, at Burns.

Wind.—Prevailing direction, southwest.—*Hon. H. E. Hayes, Master State Grange, Portland, director; B. S. Pague, Observer, Weather Bureau, asst.*

PENNSYLVANIA.

Temperature.—The mean was normal; maximum, 85, at Coatesville and York, 4th; minimum, 14, at Columbus, 12th; greatest monthly range, 68, at Smethport and Coatesville; least monthly range, 48, at Philadelphia.

Precipitation.—The average was 0.75 below the normal; greatest monthly, 4.43, at Somerset; least monthly, 0.61, at Wellsborough.

Wind.—Prevailing direction, northwest.—*Under direction of the Franklin Institute, Philadelphia; H. L. Ball, Observer, Weather Bureau, assistant.*

SOUTH CAROLINA.

Temperature.—Maximum, 88, at Winnsborough, 18th; minimum, 29, at Winnsborough, 16th.

Precipitation.—Greatest monthly, 4.53, at Yorkville; least monthly, 0.45, at Port Royal.

Wind.—Prevailing direction, southwest.—*A. P. Butler, Observer, Weather Bureau, Columbia, director.*

SOUTH DAKOTA.

The month was cool and cloudy, and the precipitation was greater than usual.

Temperature.—The mean was 4.9 below the normal; maximum, 85, at Vermillion, 30th; minimum, 5, at Cross, 8th; greatest monthly range, 68, at Vermillion; least monthly range, 45, at Saint Lawrence.

Precipitation.—The average was 2.98 below the normal; greatest monthly, 8.65, at Saint Lawrence; least monthly, 2.247, at Vermillion.

Wind.—Prevailing direction, southeast.—*S. W. Glenn, Local Forecast Official, Weather Bureau, Huron, director.*

TEXAS.

Temperature.—The mean was 2.0 above the normal; maximum, 106, at Fort Ringgold, 20th; minimum, 20, at Fort Hancock, 23d; greatest monthly range, 76, at Fort Hancock; least monthly range, 28, at Galveston.

Precipitation.—The average was 0.99 below the normal; greatest monthly, 4.86, at Wichita Falls; least monthly, 0.00, at Camp Eagle Pass, Durham, Fort McIntosh, and Luling.

Wind.—Prevailing direction, southeast.—*D. D. Bryan, Galveston, director; I. M. Cline, Local Forecast Official, Weather Bureau, assistant.*

UTAH.

Temperature.—Maximum, 87, at Moab, 29th and 30th; minimum, 11, at Soldiers Summit, 20th; greatest monthly range, 63, at Beaver and Thistle; least monthly range, 31, at Snowville.

Precipitation.—Greatest monthly, 2.11, at Fillmore; least monthly, 0.10, at Losee and Green River.

Wind.—Prevailing direction, north.—*G. N. Salisbury, Observer, Weather Bureau, Salt Lake City, director.*

VIRGINIA.

Temperature.—Maximum, 91, at Petersburg, 5th; minimum, 22, at Dale Enterprise, Lexington, and Marion, 11th; greatest monthly range, 62, at Nottoway C. H.; least monthly range, 43, at Cape Charles.

Precipitation.—Greatest monthly, 9.07, at Big Stone Gap; least monthly, 2.77, at Woodstock.

Wind.—Prevailing direction, southwest.—*Dr. E. A. Craighill, Lynchburg, director; J. N. Ryker, Observer, Weather Bureau, assistant.*

WASHINGTON.

Temperature.—The mean was 3.2 below the normal; maximum, 89, at Ritzville, 2d; minimum, 20, at Lapush, 7th; greatest monthly range, 62, at Ritzville; least monthly range, 23, at Tatoosh Island.

Precipitation.—The average was 1.64 above the normal; greatest monthly, 11.00, at Neah Bay; least monthly, 0.39, at North Yakima.

Wind.—Prevailing direction, south.—*E. B. Olney, Observer, Weather Bureau, Olympia, director.*

WEST VIRGINIA.

Temperature.—Maximum, 87, at Ella and Ritchie C. H., 28th, at Morgantown, 4th, and at Spencer, 27th, 28th, and 29th; minimum, 17, at Ritchie C. H., 11th; greatest monthly range, 70, at Ritchie C. H.; least monthly range, 50, at Martinsburgh.

Precipitation.—Greatest monthly, 6.53, at Nuttallburgh; least monthly, 2.10, at Wheeling.

Wind.—Prevailing direction, northeast.—*W. W. Dent, Observer, Weather Bureau, Parkersburgh, director.*

WISCONSIN.

Temperature.—The mean was above the normal; maximum, 80, at Berlin, 27th; minimum, —6, at Phillips, 9th; greatest monthly range, 62, at Phillips and Valley Junction; least monthly range, 43, at Pepin.

Precipitation.—Greatest monthly, 5.29, at Viroqua; least monthly, 0.30, at Butternut.—*W. L. Moore, Local Forecast Official, Weather Bureau, Milwaukee, director.*

WYOMING.

Temperature.—Maximum, 82, at Casper, 17th; minimum, 3, at Fort Yellowstone, 8th; greatest monthly range, 65, at Lusk; least monthly range, 48, at Bitter Creek and Fort Yellowstone.

Precipitation.—Greatest monthly, 4.16, at Lander; least monthly, 0.19, at Laramie.

Wind.—Prevailing direction, west.—*E. M. Ravenscraft, Observer, Weather Bureau, Cheyenne, director.*

CONTRIBUTIONS AND ORIGINAL ARTICLES.

AVERAGE HOURLY PRECIPITATION.

The following table shows the average annual amount, frequency, and intensity of precipitation at the stations named, for each hour of the day, as determined from records of self-registering gauges. The records extend from March, 1889, to December, 1891. Rainfalls of less than .05 inch and snowfall have not been included.

Hour ending at—	Boston, Mass.			Chicago, Ill.			Dodge City, Kans.			Jupiter, Fla.			Saint Louis, Mo.			San Francisco, Cal.		
	Amount.	Frequency.	Intensity.	Amount.	Frequency.	Intensity.	Amount.	Frequency.	Intensity.	Amount.	Frequency.	Intensity.	Amount.	Frequency.	Intensity.	Amount.	Frequency.	Intensity.
1 a. m.	1.46	21.8	.067	1.36	16.9	.073	2.16	12.1	.179	2.76	23.3	.118	1.06	9.8	.108	1.02	9.5	.107
2 a. m.	1.05	21.6	.076	.81	15.3	.053	1.34	12.1	.102	2.85	24.0	.119	.94	11.5	.082	1.00	12.8	.078
3 a. m.	1.68	22.0	.076	.80	17.1	.047	1.03	9.6	.107	2.49	21.3	.117	.60	10.3	.058	1.18	15.2	.078
4 a. m.	1.85	22.8	.083	.60	14.1	.043	.62	8.8	.070	1.94	15.8	.123	.83	10.6	.078	1.05	14.2	.073
5 a. m.	2.08	23.8	.087	.52	12.3	.042	.68	7.9	.086	1.40	10.0	.088	.78	9.9	.079	.98	13.0	.071
6 a. m.	2.79	23.1	.077	.83	16.3	.051	.44	5.3	.083	1.97	16.3	.121	.70	10.5	.067	1.26	14.0	.090
7 a. m.	1.44	19.0	.060	.83	11.7	.071	.36	3.0	.064	1.67	15.4	.108	.77	8.7	.089	1.39	13.7	.094
8 a. m.	1.44	21.6	.067	.62	15.9	.039	.28	0.4	.044	1.39	16.0	.087	.86	11.7	.074	1.01	14.9	.068
9 a. m.	1.51	19.5	.077	.46	14.8	.031	.43	6.6	.065	1.69	13.8	.122	.71	8.5	.084	1.15	14.1	.082
10 a. m.	1.47	18.2	.078	.46	13.5	.034	.40	6.8	.059	1.43	17.6	.081	.79	10.2	.077	.83	14.4	.085
11 a. m.	1.95	19.6	.069	.52	11.5	.045	.22	4.9	.045	2.55	19.5	.131	.79	10.2	.077	1.20	14.0	.086
Noon.	1.24	17.2	.072	.54	12.4	.044	.49	5.2	.044	2.32	23.5	.099	.76	9.7	.078	.86	11.7	.074
1 p. m.	1.90	13.1	.073	.41	14.0	.039	.35	5.3	.066	2.06	17.2	.120	.85	6.7	.127	.61	9.5	.064
2 p. m.	1.01	14.4	.070	.52	12.4	.042	.33	0.0	.050	2.22	18.8	.118	.97	8.0	.121	.65	10.8	.060
3 p. m.	1.33	16.7	.080	.44	10.5	.042	.39	7.8	.050	4.86	24.2	.201	.83	8.7	.095	1.00	14.5	.069
4 p. m.	1.98	18.7	.106	.43	9.9	.043	.39	7.0	.059	2.68	21.3	.126	1.26	7.7	.164	.77	13.0	.076
5 p. m.	1.35	17.1	.079	.34	9.1	.037	.41	6.0	.068	3.29	24.1	.137	1.35	10.0	.135	.86	11.3	.076
6 p. m.	1.43	18.1	.079	.85	9.1	.093	.73	6.1	.120	2.43	25.1	.097	.93	9.1	.102	1.13	12.6	.090
7 p. m.	1.22	18.9	.065	.73	10.4	.070	.68	4.9	.139	2.63	21.2	.124	.60	7.3	.082	1.08	14.5	.074
8 p. m.	1.40	19.4	.072	1.15	14.3	.080	.66	6.6	.100	1.87	20.2	.093	.96	10.4	.092	1.15	16.1	.071
9 p. m.	1.15	18.5	.068	.87	12.8	.068	.86	8.0	.108	1.34	16.5	.081	.80	10.1	.079	.82	12.3	.067
10 p. m.	1.33	19.2	.069	.65	14.0	.046	.73	6.1	.120	1.12	13.6	.082	.81	10.1	.080	.81	12.0	.068
11 p. m.	1.84	22.6	.081	.69	14.5	.048	.91	8.4	.108	1.06	11.6	.091	.94	10.9	.086	.77	11.5	.067
12 p. m.	1.15	18.7	.061	1.44	16.3	.068	.82	11.1	.074	1.15	15.9	.072	1.01	9.6	.105	.99	11.5	.086
Total.	35.66			16.77			15.63			51.17			20.90			23.47		
Means.	1.48	19.4	.076	.70	13.3	.053	.65	7.3	.086	2.13	18.8	.113	0.87	9.6	.091	0.96	13.3	.073

The average rainfall by regular gauge measurements for the same period of time at Boston was 39.54 inches; Chicago, 29.93; Dodge City, 19.94; Jupiter, 52.81; San Francisco, 24.87; Saint Louis, 30.63.

METEOROLOGICAL TABLES.

Meteorological record of Army post surgeons, voluntary, and other co-operating observers, April, 1892.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean.			Max.	Min.	Mean.	
Alabama.	0	0	0	Inch.	Alabama—Cont.	0	0	0	Inch.
Bermuda *†	85	35	66.8	0.17	Tusculum *†	85	40	62.1	13.94
Bessemer	84	36	63.2	3.04	Tusculum *†	86	37	65.5	
Brewton	87	36	68.3	1.60	Union Springs	87	37	65.3	0.99
Carrollton *†	84	43	65.1	5.40	Valley Head *†	79	33	58.8	11.31
Childersburgh	82	47	68.6	4.91	Walker Springs	88	47	69.9	1.26
Citronelle	82	47	68.6	4.91	Wiggins	91	38	69.4	0.74
Clairborne Landing	82	47	68.6	4.91	Alaska.				
Cordova	82	47	68.6	4.91	Killianoo *†	52	22	35.0	2.00
Decatur	82	47	68.6	4.91	Arizona.				
Decatur *†	86	33	64.4		Antelope Valley	94	39	65.6	0.97
Double Springs *†	85	35	65.2	9.70	Aria, Can. Co. Dam	92	39	61.7	0.42
Eufaula *†	88	43	66.2	0.00	Benson	84	32	58.8	0.60
Eufaula	85	42	68.6	0.10	Bisbee	81	40	60.8	0.33
Evergreen	85	38	67.5	0.75	Calabasas *†	94	40	69.1	0.00
Fayette C. H. *†	85	37	66.5	5.48	Casa Grande	94	40	69.1	0.00
Florence	85	37	66.5	5.48	Chiricahua Mts	88	30	60.0	0.58
Florence *†	85	32	62.6	14.78	Crittenden *†	83	42	64.1	0.29
Fort Deposit	87	38	68.3	0.50	Dragon Summit	92	23	62.1	0.92
Gadsden	87	38	68.3	0.50	Dudleyville	80	13	47.1	3.33
Geneva	87	40	67.1	1.09	Farley's Camp	80	13	47.1	3.33
Greensborough	86	38	64.6	1.96	Flagstaff *†	95	33	64.6	0.00
Healing Springs	88	37	67.2	4.56	Florence	79	18	50.1	1.36
Jasper	82	30	62.1	3.04	Fort Apache	83	30	59.8	0.41
Livingston	88	39	64.4	2.41	Fort Bowie	85	27	57.8	0.64
Livingston *†	87	37	67.9	1.22	Fort Grant	83	29	57.4	1.12
Lynn	88	29	62.8	11.57	Fort Huachuca	101	38	69.8	0.33
Mountain Home	85	40	66.8	1.18	Gila Bend *†	88	50	69.8	0.33
Mount Willing	85	31	62.5	13.20	Gila Bend	96	46	73.7	0.31
Newburgh	86	39	64.9	0.40	Grand Central Mill	84	19	50.2	0.19
Newton	84	36	63.9	0.27	Holbrook	83	33	57.1	0.55
Opelika	78	34	62.6	6.99	Lochiel	103	44	70.8	0.40
Oxanna	88	48	68.2	0.63	Maricopa	85	29	58.6	0.99
Pine Apple	84	51	69.8	0.00	Mount Huachuca	85	29	58.6	0.99
Pittsborough	87	37	65.7	2.58	Natural Bridge	85	37	61.8	1.26
Pushmataha	87	37	65.7	2.58	New River	85	37	61.8	1.26
Selma	83	33	61.0	13.85	Nogales	84	30	59.0	0.00
Scottsboro	83	33	61.0	13.85	Oracle	84	30	59.0	0.00
Sturdevant	83	33	61.0	13.85	Oro	84	30	59.0	0.00
Talladega	83	33	61.0	13.85	Pantano	93	39	65.9	0.90
Tallapoosa	86	36	67.3	1.71	Payson	83	28	52.9	1.27
Thomasville	86	36	67.3	1.71	Peoria	90	36	64.4	0.70
Tuscaloosa	88	36	65.3	3.16					

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean.			Max.	Min.	Mean.	
Arizona—Cont'd.	o	o	o	Inch.	Arkansas—Cont'd.	o	o	o	Inch.
Phoenix a †	90	35	65.5	0.70	Malvern †	87	32	64.5	1.32
Phoenix b †	90	34	64.3	0.68	Marshall †	90	32	59.5	7.85
Red Rock * ^b	96	50	75.2	0.72	Mount Nebo †	81	35	57.0	3.35
Saint Johns †	90	34	64.3	0.44	Newport a †	86	38	65.2	4.21
San Carlos	95	28	61.3	1.03	Newport b †	86	38	65.2	4.21
San Simon * ¹	96	48	69.0	0.07	Ozceola †	84	39	60.2	6.98
Signal †	91	34	64.3	0.44	Ozark †	92	34	62.0	4.17
Tevison	91	34	64.3	0.00	Ozone †	82	33	57.3	5.03
Texas Hill * ¹	100	39	66.2	.....	Pine Bluff †	88	36	63.2	6.45
Tombstone †	88	33	60.6	0.00	Prescott †	84	40	66.1	1.46
Tucson a †	96	30	65.6	0.26	Rogers †	89	30	58.3	5.92
Tucson b ¹	90	34	64.3	.....	Russellville †	90	34	65.2	1.00
Walnut Grove †	83	28	54.2	1.00	Stuttgart †	90	40	62.8	6.94
Walnut Ranch *† ¹	83	28	54.2	0.92	Texarkana †	89	39	64.4	8.58
Whipple Barracks	78	30	59.0	0.58	Washington * ¹	81	47	64.5	.....
Willcox * ¹	88	40	69.2	0.25	Winslow *† ¹	84	32	55.1	3.74
Wilcox †	88	40	69.2	0.65	California.				
Winslow †	88	31	59.6	T.	Agnew ¹	74	33	52.8	0.50
Wood Canon	99	52	77.2	1.50	Alcalde * ¹	84	45	61.3	0.11
Yuma * ¹	99	52	77.2	.....	Almaden * ¹	78	41	55.3	1.27
Arkansas.					Alvarado †	87	38	60.6	0.87
Arkadelphia †	80	34	62.4	6.92	Anaheim * ¹	90	40	61.6	0.15
Arkansas City †	80	34	62.4	10.22	Antioch	74	45	56.3	0.46
Black Rock *† ¹	88	30	61.2	7.23	Aptos * ¹	75	42	55.4	1.95
Brinkley †	84	41	61.9	7.09	Arclata	68	32	50.3	5.34
Camden a †	80	42	62.4	9.74	Athlone * ¹	85	41	58.3	0.99
Camden b † ¹	80	42	62.4	8.21	Auburn * ¹	75	41	56.7	3.11
Conway †	82	44	61.6	5.85	Bakersfield a * ¹	80	43	61.6	1.00
Corner Stone * ¹	86	42	63.4	6.39	Bakersfield b †	88	31	58.0	0.10
Dallas †	86	27	61.0	8.74	Ballast Point L. H.	.....			0.26
Dardanelle †	84	33	59.4	5.46	Beaumont * ¹	83	36	56.1	0.37
El Dorado †	84	33	59.4	8.65	Belmont * ¹	75	45	58.2	.....
Fayetteville † ¹	90	30	58.2	4.76	Berendo * ¹	82	45	60.5	0.45
Forrest City †	84	41	63.6	6.69	Berkeley ¹	67	38	51.2	1.68
Fulton †	80	32	61.0	7.54	Bishop Creek * ¹	87	34	60.6	0.00
Gaines Landing †	80	32	61.0	11.06	Boca ¹	60	15	37.1	2.70
Helena a †	87	41	63.0	8.12	Borden * ¹	84	42	58.1	0.24
Helena b †	87	41	63.0	7.85	Boulder Creek * ¹	83	29	53.9	1.99
Hope *† ¹	90	44	64.4	7.80	Brentwood * ¹	76	45	58.0	0.50
Hot Springs	89	32	61.0	7.54	Brighton * ¹	81	42	57.1	0.84
Lead Hill †	97	31	64.2	4.30	Byron * ¹	78	44	59.0	0.40
Lonoke * ¹	81	42	64.2	8.31	Callento * ¹	80	45	59.0	0.30
Madding †	81	42	64.2	8.61	Calistoga * ¹	76	44	57.5	1.10

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
California—Cont'd.	°	°	°	Ins.	California—Cont'd.	°	°	°	Ins.
Cape Mendocino L. H.	70	39	56.2	3.01	Nevada City *1.	72	32	47.3	7.17
Castroville *1.	80	49	57.0	1.10	Newark *1.	74	40	56.2	0.88
Chico *1.	84	38	56.2	3.81	Newcastle *1.	72	36	52.4	2.48
Cisno *1.	86	15	51.2	6.30	Newhall *1.	90	38	60.7	0.06
Citrus *1.	88	38	61.4	0.00	Newman *1.	79	47	60.1	0.55
Claremont *1.	91	36	58.0	0.27	Niles *1.	84	40	58.2	0.90
Colfax *1.	72	32	48.3	5.73	Nordhoff *1.	87	31	55.8	0.47
Colton *1.	86	36	58.1	0.24	Norwalk *1.	90	45	63.4	0.00
Corning *1.	79	40	56.3	1.41	Oakland *1.	72	38	53.4	1.09
Crescent City	.....	.....	.....	9.43	Oakland *1.	66	48	55.7	0.98
Crescent City L. H.	.....	.....	.....	8.76	Ogilby *1.	102	55	73.9	0.00
Davisville *1.	79	44	59.8	0.92	Oleta *1.	71	35	52.6	3.04
Davisville *1.	86	38	59.6	1.03	Ontario *1.	88	42	60.2	0.11
Delano *1.	83	42	60.7	0.13	Orangevale *1.	77	31	54.6	2.07
Delta *1.	78	35	53.9	6.31	Orland *1.	82	43	59.1	1.16
Downey *1.	90	46	63.7	0.25	Oroville *1.	77	44	55.5	3.53
Drytown *1.	74	34	52.8	2.14	Pajaro *1.	76	34	55.9	1.34
Duarte *1.	91	42	61.6	0.24	Palo Alto *1.	76	35	54.6	4.08
Dunnigan *1.	79	40	59.6	0.87	Palm Springs *1.	103	50	75.5	0.11
Dunsmuir *1.	70	30	49.1	5.48	Paso Robles *1.	88	40	57.4	0.11
East Brother L. H.	.....	.....	.....	0.31	Petaluma *1.	75	44	53.2	1.82
Edgewood *1.	65	30	44.4	0.86	Piedras Blancas L. H.	.....	.....	.....	1.35
El Casco *1.	90	38	60.0	0.00	Pigeon Point L. H.	77	42	51.1	4.33
El Dorado *1.	78	43	52.1	3.61	Placerville *1.	71	30	47.7	5.39
Elk Grove *1.	76	38	55.9	1.38	Pleasanton *1.	85	41	59.6	0.91
Elmira *1.	81	43	59.7	1.77	Pt. Ano Nuevo L. H.	.....	.....	.....	2.20
El Verano *1.	75	45	56.1	3.26	Point Arena L. H.	.....	.....	.....	7.95
Emigrant Gap *1.	55	29	37.1	3.00	Point Bonita L. H.	.....	.....	.....	2.67
Esparto *1.	78	42	57.1	0.33	Point Conception L. H.	.....	.....	.....	0.60
Evergreen *1.	84	42	60.8	0.85	Point Fermin L. H.	.....	.....	.....	1.10
Exeter *1.	84	42	60.8	0.33	Pt. Huene L. H.	.....	.....	.....	0.50
Farlington *1.	80	36	54.9	1.23	Point Loma L. H.	.....	.....	.....	0.31
Felton *1.	89	34	57.2	3.12	Point Montara L. H.	.....	.....	.....	1.68
Fernando *1.	87	37	60.9	0.21	Point Pinos L. H.	.....	.....	.....	1.07
Florence *1.	93	46	60.5	0.14	Point Reyes L. H.	.....	.....	.....	2.11
Florin *1.	80	36	57.0	0.00	Point Sur L. H.	.....	.....	.....	1.16
Folsom City *1.	80	40	58.8	2.04	Pomona *1.	95	33	58.1	0.16
Folsom City *1.	.....	.....	.....	1.85	Porterville *1.	84	44	62.3	0.16
Forestville *1.	81	25	49.6	3.34	Puente *1.	90	45	61.0	0.08
Fort Bidwell *1.	65	22	40.8	0.28	Ravenna *1.	90	42	60.0	0.00
Fresno *1.	80	44	61.5	0.22	Red Bluff *1.	80	43	58.1	2.19
Fruto *1.	78	42	57.0	1.89	Redding *1.	80	34	52.9	2.31
Galt *1.	87	40	63.7	1.10	Redding *1.	73	33	52.9	4.27
Georgetown *1.	73	31	48.6	7.47	Riverside *1.	94	34	59.8	0.21
Gilroy *1.	78	44	53.1	0.90	Roe Island L. H.	.....	.....	.....	0.37
Girard *1.	68	30	49.4	1.00	Rocklin *1.	76	38	56.0	1.88
Glen Ellen *1.	80	40	54.3	3.22	Rumsey *1.	75	38	61.6	1.21
Goshute *1.	80	35	54.6	0.50	Sacramento *1.	78	31	51.9	1.21
Grass Valley *1.	69	28	46.9	6.10	Sacramento *1.	92	40	60.0	0.76
Grass Valley *1.	67	41	52.4	0.95	Salinas *1.	71	46	55.7	0.76
Hollister *1.	81	40	55.4	0.04	Salinas *1.	68	40	50.8	0.85
Hornbrook *1.	75	35	45.2	1.50	Salton *1.	75	47	57.3	0.88
Humboldt L. H.	.....	.....	.....	4.65	Sanger Junction *1.	102	51	73.5	0.46
Huron *1.	88	43	64.5	0.17	San Ardo *1.	87	43	61.2	0.08
Hyde Ranch *1.	68	30	48.8	1.80	San Ardo *1.	85	43	57.7	0.08
Independence *1.	83	29	56.6	0.22	San Bernardino *1.	82	39	54.0	0.10
Indio *1.	92	54	72.3	0.00	San Gabriel *1.	89	34	59.0	0.37
Ione *1.	74	40	54.4	1.40	San Jose *1.	89	43	60.3	0.20
Iowa Hill *1.	74	36	49.7	6.02	San Luis L. H.	74	42	54.5	0.65
Jackson *1.	80	30	53.0	2.70	San Mateo *1.	68	44	53.1	1.01
Jolon *1.	.....	.....	.....	0.32	San Miguel *1.	55	40	57.1	0.06
Julian *1.	77	28	52.5	6.11	San Pedro *1.	85	45	60.4	0.77
Keeler *1.	80	39	58.5	0.00	Santa Ana *1.	85	43	63.3	0.25
Keene *1.	72	35	53.1	1.86	Santa Barbara *1.	83	40	57.8	0.46
Kennedy Gold Mine	74	36	52.4	3.63	Santa Barbara L. H.	82	51	62.9	0.45
King City *1.	76	40	57.1	0.26	Santa Clara	.....	.....	.....	1.30
Kingsburgh *1.	75	45	57.8	0.33	Santa Cruz *1.	75	41	55.1	1.84
Knights Landing *1.	81	40	59.0	0.91	Santa Cruz *1.	83	33	55.4	1.73
La Grange *1.	81	38	57.8	1.19	Santa Margarita *1.	84	31	56.0	0.07
Lathrop *1.	81	40	56.9	1.27	Santa Maria	70	47	56.8	0.45
Laurel *1.	85	31	54.4	1.71	Santa Monica *1.	70	40	59.7	0.54
Lemoore *1.	85	45	60.8	0.34	Santa Paula *1.	70	35	55.3	0.80
Lime Point L. H.	.....	.....	.....	1.70	Selma *1.	60	41	60.4	0.80
Livermore *1.	79	36	55.0	0.90	Shasta *1.	67	26	44.8	7.77
Lodi *1.	85	45	58.6	0.69	Shasta Springs *1.	70	40	57.1	2.26
Lodi *1.	79	35	55.8	1.78	Sims *1.	76	30	49.8	8.39
Long Beach *1.	78	38	56.8	0.26	Sisson *1.	60	32	42.9	5.38
Los Angeles *1.	84	50	62.2	0.85	Soledad *1.	76	40	54.4	0.29
Los Banos *1.	79	40	62.4	0.76	Sonoma *1.	75	38	51.2	2.01
Los Gatos *1.	74	36	54.6	0.81	Soquel *1.	72	42	56.1	2.46
Los Gatos *1.	73	34	53.7	0.00	S. E. Farallon L. H.	.....	.....	.....	1.57
Mammoth Tank *1.	98	51	74.8	0.00	South Vallejo *1.	68	43	54.9	1.53
Mare Island L. H.	.....	.....	.....	1.22	Spadra *1.	93	43	61.9	0.62
Martinez *1.	74	44	59.0	1.86	Steeles	80	37	54.3	1.03
Marysville *1.	80	42	57.1	0.47	Stockton *1.	77	38	55.7	0.81
Menlo Park *1.	79	40	55.3	0.35	Stockton *1.	77	45	59.3	1.09
Merced *1.	77	41	56.6	1.63	Summit *1.	45	15	34.7	4.50
Milton (near) *1.	77	41	53.8	0.45	Suisun City *1.	78	45	57.6	2.09
Modesto *1.	78	50	61.5	0.42	Suisun City *1.	78	45	57.6	2.09
Modesto *1.	78	37	59.7	0.62	Susanville *1.	88	28	43.2	2.58
Mohave *1.	85	40	58.0	0.35	Sutter Creek *1.	71	30	48.8	2.58
Monahan *1.	82	40	61.0	0.35	Tehachapi *1.	80	32	49.4	0.61
Montague *1.	70	34	51.0	0.49	Tehama *1.	80	44	54.0	3.00
Monterey *1.	80	38	57.9	0.82	Templeton *1.	85	40	57.8	0.78
Monterey (Hotel del Monte) *1.	72	39	59.2	0.00	Towles *1.	69	32	46.4	7.38
Mullane *1.	81	31	55.2	2.00	Tracy *1.	78	40	58.9	0.71
Napa City *1.	80	36	54.3	2.95	Trinidad L. H.	79	44	59.2	0.00
Napa City *1.	73	39	55.1	2.14	Tropico *1.	84	42	59.2	0.25
Napa City *1.	87	39	59.0	0.28	Truckee *1.	54	22	37.3	3.90
Needles *1.	90	45	69.7	0.13					

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
California—Cont'd.					Colorado—Cont'd				
Tulare *1.	90	40	59.7	0.26	T. S. Ranch *1.	76	22	46.1	Ins.
Turlock *1.	75	42	57.6	0.50	Thon *1.	83	12	42.6	0.84
Upper Lake.	74	32	49.0	2.84	Twin Lakes.	.....	.....	.....	0.88
Upper Mattole *1.	74	38	49.8	9.52	Vilas.	.....	.....	.....	0.05
Vacaville *1.	79	44	56.4	2.31	Villa Grove †	.....	.....	.....	0.25
Vacaville *1.	85	43	56.3	1.35	Willet †	.....	.....	.....	1.17
Valley Springs *1.	83	47	58.5	1.80	Ward District.	.....	.....	.....	4.11
Ventura *1.	76	41	57.0	0.57	Wilde †	79	33	56.0	0.86
Vina *1.	78	38	57.5	2.30	Yuma †	.....	.....	.....	3.20
Volcano Springs *1.	104	55	77.7	.....	Zuck †	.....	.....	.....	0.39
Volta *1.	80	48	60.1	1.12	Connecticut.				
Walla Walla Ck *1.	68	24	38.2	2.94	Canton	78	22	46.9	0.00
Walnut Creek	78	37	55.2	0.89	Colchester	77	21	45.0	1.21
West Butte *1.	68	34	51.1	1.68	Falls Village.	.....	.....	.....	0.70
Westley *1.	80	43	61.8	0.82	Hartford b.	93	.....	.....	0.83
Wheatland.	80	37	55.2	2.29	Lake Konomoc	.....	.....	.....	1.79
Whittier *1.	87	50	66.0	0.21	Lebanon	.....	.....	.....	1.13
Williams *1.	80	40	57.8	1.10	Mansfield †	76	22	44.9	0.70
Willow †	72	31	52.4	1.13	New Hartford a *1 †	74	19	40.8	0.75
Willow b *1	76	36	54.5	1.71	New Hartford b.	.....	.....	.....	0.74
Winchester †	91	33	58.6	0.16	N. Grosvenor Dale †	74	22	46.3	0.39
Winters *1.	88	48	62.9	0.82	Norwalk a †	80	24	48.0	1.00
Woodland *1.	75	32	56.0	1.28	Norwalk b.	79	20	44.6	1.34
Yerba Buena L. H.	.....	.....	.....	1.01	Southington *1.	76	24	47.1	1.05
Yountville *1.	60	25	47.0	1.22	South Manchester.	.....	.....	.....	0.85
Yreka †	69	25	47.0	1.02	Stevenson.	.....	.....	.....	1.44
Yuba City *1.	78	45	58.8	1.91	Thompson *1.	76	26	44.9	.....
Colorado.					Voluntown †.	77	20	46.2	1.82
Abbot.	82	30	46.4	2.55	Wallingford †	.....	.....	.....	1.14
Agate *1.	55	—	28.5	0.46	Waterbury.	76	19	43.7	0.95
Alamosa	55	—	28.5	0.65	West Simsbury.	.....	.....	.....	0.66
Alma †	65	28	48.7	3.08	Delaware.				
Amherst †	65	28	48.7	0.80	Dover †.	81	30	51.9	4.06
Arboles	.....	.....	.....	0.50	Kirkwood *1.	76	.....	48.0	.....
Ayoca.	.....	.....	.....	2.80	Seaford †	81	20	53.5	5.58
Box Elder	.....	.....	.....	0.30	District of Columbia.				
Brandon	.....	.....	.....	0.02	District Reservr *1.	79	33	52.0	5.28
Brackenridge †	70	—	28.8	5.95	Kendall Green *1 †.	77	35	52.7	4.19
Brush.	.....	.....	.....	1.50	Long Bridge †	.....	.....	.....	4.96
Carson *1.	58	18	32.2	2.06	Reeving Reservr *1.	79	33	51.6	5.34
Castle Rock †	79	17	44.7	0.50	West Washington †.	87	39	54.5	4.34
Cheyenne Wells *1 †	78	24	43.2	0.50	Florida.				
Climax *1 †	44	—	25.0	2.80	Amelia †.	84	45	67.7	0.10
Collbran †	.....	.....	.....	2.61	Archer †.	92	33	69.2	0.16
Colorado Springs †.	77	17	43.8	0.38	Brooksville †	88	47	67.4	0.69
Como (near) †.	57	6	31.5	0.56	De Land b.	87	40	69.2	.....
Cope †.	87	17	48.0	4.64	Eustis †.	93	43	71.3	1.6
Crook †.	88	21	46.2	2.74	Federal Point †.	88	.....	.....	0.7
Cumbres †.	52	—	28.5	3.10	Flatwood	.....	42	69.1	0.82
Delta †.	76	18	42.0	.....	Fort Meade †.	89	39	69.1	0.83
Dillon †.	.....	.....	.....	3.53	Gainesville †.	94	45	71.4	1.45
Downing †.	84	8	43.8	2.40	Gramere.	90	46	71.8	.....
Dumont.	.....	.....	.....	2.05	Green Cove Spgs †.	87	38	68.4	0.30
Fort Collins †.	79	19	44.0	1.60	Homeland *1.	90	45	74.0	0.45
Fort Collins (near).	.....	.....	.....	0.95	Hypoluxo *1.	88	60	73.5	0.31
Fruita †.	86	21	50.2	0.88	Kissimmee City †.	.....	59	.....	0.41
Garnett.	.....	.....	.....	1.44	Manatee †.	88	40	71.5	0.27
Gaynor.	65	8	37.0	2.18	Merritts Island †.	88	55	73.7	1.04
Georgetown †.	78	16	45.0	0.7	Mullet Key †.	97	57	70.6	0.35
Glen Eyrie †.	65	8	37.0	2.18	Myers †.	88	50	71.0	4.44
Gold Hill.	85	18	45.0	0.7	Ocala *1 †.	88	53	70.6	0.64
Grand Junction †.	82	26	51.6	1.37	Orange City †.	90	44	71.8	0.92
Grover †.	75	20	43.2	1.24	Orlando †.	92	50	73.9	0.60
Hugo.	86	23	48.8	.....	Oxford *1 †.	91	52	74.2	1.24
Husted †.	78	15	43.4	0.94	St. Andrews Bay †.	88	43	70.2	0.66
Idaho Springs †.	68	7	37.9	2.24	St. Francis B'ks.	86	40	68.6	0.80
Jefferson *1 †.	89	8	31.8	0.50	St. Petersburg †.	91	53	71.9	0.19
Julesburg †.	83	16	44.7	4.73	Tallahassee †.	83	42	66.4	0.85
Kirk.	.....	.....	.....	1.60	Tarpon Springs †.	91	46	73.4	0.34
Lamar †.	90	25	53.4	0.76	Westville *1 †.	93	49	69.6	1.97
La Porte.	.....	.....	.....	0.92	Georgia.				
Las Animas †.	85	23	49.1	0.05	Adamsville †.	86	33	61.8	10.73
Lavender.	.....	.....	.....	1.33	Albany †.	86	44	70.2	T.
Lay *1.	71	26	42.1	0.98	Allapaha †.	86	40	67.8	0.17
Le Roy *1.	81	23	43.8	4.02	Americus †.	90	37	68.0	0.27
Leslie.	.....	.....	.....	2.80	Athens a †.	80	35	59.5	4.45
Livermore †.	75	22	42.9	1.05	Athens b †.	82	32	60.2	4.56
Longmont †.	80	19	44.8	1.56	Blackshear †.	87	40	68.4	0.00
Loveland.	.....	.....	.....	1.91	Camak †.	84	38	64.3	0.03
Magnolia *1.	86	24	53.7	0.76	Canton †.	.....	.....	.....	8.08
Manhattan.	.....	.....	.....	1.80	Cordele †.	90	32	68.6	T.
Middle Box Elder.	.....	.....	.....	1.29	Columbus †.	85	41	67.3	0.51
Minneapolis †.	.....	.....	.....	0.24	Dahlonega †.	81	31	59.0	6.25
Monte Vista a.	72	5	41.0	1.18	Darien †.	91	41	67.8	0.15
Moraine †.	64	0	35.6	1.69	Diamond †.	80	29	57.0	10.82
Pagoda (near) †.	71	12	39.3	1.86	Dublin †.	.....	.....	.....	0.41
Paonia †.	.....	.....	.....	0.94	Eastman †.	85	34	63.8	0.00
Parachute †.	77	12	46.2	0.19	Elberton †.	.....	.....	.....	4.17
Platoro †.	54	6	35.2	1.75	Fleming †.	88	31	64.9	0.11
Red Cliff.	.....	.....	.....	1.13	Forsyth *1.	87	42	66.0	0.55
Rico.	.....	.....	.....	0.45	Fort Gaines †.	86	35	67.8	0.24
Robb †.	90	25	48.0	3.36	Gainesville †.	78	32	59.8	1.68
Rocky Ford †.	90	21	50.7	0.73	Gillsville *1 †.	78	40	60.4	6.12
Saint Cloud.	.....	.....	.....	3.75	Hawkinsville †.	84	38	66.0	0.48
Sanborn.	.....	.....	.....	1.82	Hephisbah *1.	80	44	63.8	0.80
San Luis †.	69	3	39.6	1.38	La Fayette.	82	32	60.6	10.45
Sedgewick.	.....	.....	.....	1.75	La Grange *1 †.	84	33	62.5	1.59
Seibert †.	.....	.....	.....	0.11	Lincolnton †.	81	33	61.2	2.34
Sh Sheridan Lake *1 †.	89	29	47.6	0.87	Lithia Springs †.	84	39	58.8	5.39
Smoky Hill Mine †.	70	5	38.6	1.07	Louisville †.	91	35	65.8	0.30
Stamford.	.....	.....	.....	2.25	Lumpkin †.	87	38	67.0	0.17
Steamboat Spring †.	71	13	37.4	1.20	McArthur †.	80	41	62.8	0.43
Surface Creek †.	74	20	45.8	1.29	Macon †.	82	44	62.8	T.
Table Rock †.	72	8	38.4	1.75	Marietta †.	80	37	58.6	6.41
					Marshallville †.	84	39	62.7	0.36

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
<i>Georgia—Cont'd.</i>				<i>Ins.</i>	<i>Indiana—Cont'd.</i>				<i>Ins.</i>
Milledgeville†.....	83	37	63.3	0.36	Irrington*†.....	80	27	48.4	5.80
Millen†.....	88	32	64.3	0.59	Jeffersonville.....	84	29	55.5	7.21
Morgan†.....	84	38	62.6	0.21	La Fayette†.....	80	23	50.0	7.51
Newnan†.....	84	38	62.6	0.01	Logansport†.....	79	27	51.6	4.82
Point Peter*†.....	78	34	59.4	4.85	Marion†.....	81	15	48.9	5.47
Poultan†.....	86	33	66.5	0.12	Mausy†.....	80	32	49.5	5.40
Quitman†.....	86	40	68.4	0.70	Michigan City†.....	82	23	48.5	4.30
Quitman†.....	88	35	68.8	0.36	Mount Vernon†.....	85	29	54.6	7.07
Reaca†.....	83	34	60.1	10.72	Mount Vernon†.....	85	29	54.6	7.07
Rome†.....	88	37	67.4	1.03	Muncie*†.....	80	24	52.1	7.98
Thomasville†.....	78	33	59.0	6.48	New Albany*†.....	81	31	55.8	7.98
Toccoa†.....	78	37	61.8	2.23	Point Isabel†.....	78	23	48.3	5.23
Union Point†.....	85	32	61.8	2.23	Princeton*†.....	82	23	53.3	6.40
Washington†.....	85	40	68.7	0.00	Rockville†.....	81	24	50.6	7.47
Way Cross†.....	84	48	68.7	0.00	Rushville†.....	84	27	53.8	8.40
Waynesborough†.....	86	34	65.5	0.63	Seymour†.....	75	30	54.3	3.98
West Point†.....	83	42	67.7	0.00	Shelbyville*†.....	81	28	52.7	0.97
<i>Idaho.</i>					Terre Haute†.....	82	24	54.3	7.98
American Falls†.....	68	17	42.4	0.89	Vevay†.....	81	21	49.0	4.59
Boise Barracks.....	67	28	46.1	1.25	Vincennes†.....	81	21	49.0	4.59
Elk City†.....	64	13	37.0	4.51	Wabash†.....	83	26	52.0	8.39
Era†.....	55	10	35.2	1.05	Worthington†.....	83	26	52.0	8.39
Fort Sherman.....	70	15	45.0	2.60	<i>Indian Territory.</i>				
Garden Valley†.....	65	25	45.2	2.84	Enfauia†.....	92	25	56.6	0.55
Henry's Lake†.....	55	11	30.8	1.10	Fort Supply.....	91	47	64.7	7.20
Kootenai†.....	73	15	42.4	2.10	Headton†.....	96	35	63.9	6.02
Monocow*†.....	64	31	46.6	2.62	Lehigh†.....	95	38	64.0	2.77
Nathburg*†.....	79	28	42.3	3.23	Pauls Valley†.....	98	33	62.3	3.50
<i>Illinois.</i>					Purcell†.....	96	44	69.2	2.81
Alton†.....	80	22	51.0	8.97	Sapulpa†.....	92	33	62.7	5.32†
Atwood†.....	78	20	44.7	3.59	South McAlester†.....	92	33	62.7	5.32†
Aurora†.....	81	23	46.0	4.00	Tulsa†.....	92	33	62.7	5.32†
Aurora†.....	81	23	46.0	4.00	<i>Iowa.</i>				
Beardstown†.....	74	24	48.3	3.84	Algona*†.....	64	23	41.8	3.82
Beason†.....	74	24	48.3	3.84	Altam†.....	80	20	40.6	4.54
Bloomington†.....	81	22	46.4	6.41	Altam†.....	80	20	40.6	4.54
Carlinville†.....	83	26	50.9	9.34	Amana†.....	72	22	45.8	4.43
Centralia†.....	84	32	49.0	11.96	Ames†.....	69	22	46.3	4.28
Charleston†.....	79	26	50.5	10.12	Atlantic†.....	80	21	45.4	3.88
Chester†.....	74	28	43.0	4.66	Bancroft†.....	64	19	42.1	4.82
Cockrell†.....	74	28	43.0	4.66	Belle Plaine†.....	73	20	45.5	4.04
Collinsville†.....	72	24	49.6	4.20	Blakeville†.....	75	20	45.5	4.23
Decatur†.....	80	23	45.6	3.27	Blockton†.....	74	24	47.5	3.86
Dixon†.....	74	27	51.4	6.81	Bonaparte*†.....	74	27	49.7	7.00
East Peoria†.....	74	27	51.4	6.81	Carroll†.....	78	26	42.8	4.73
Ellsworth†.....	78	28	49.6	7.41	Cedar Falls†.....	71	14	44.3	2.82
Fairmount†.....	85	21	52.0	8.02	Cedar Rapids†.....	74	24	46.6	4.15
Flora†.....	78	25	43.8	3.57	Charles City†.....	61	18	41.5	3.10
Fort Sheridan.....	84	34	56.8	5.57	Clarinda†.....	76	27	49.0	5.14
Golconda†.....	84	24	51.0	7.91	Clinton†.....	77	23	46.7	4.43
Greenville†.....	75	26	50.6	6.97	College Springs†.....	68	23	44.5	3.85
Havana†.....	77	27	51.0	4.84	Corning†.....	75	24	47.6	3.85
Hennepin†.....	76	22	48.3	3.33	Cresco†.....	69	18	41.9	5.68
Irishtown.....	83	30	55.7	11.03	Delaware†.....	69	20	42.2	4.02
Jordan Grove†.....	80	23	46.6	2.76	Fairfield†.....	69	18	41.4	5.57
La Grange†.....	70	22	43.4	6.05	Fayette†.....	75	27	51.5	4.90
Lanark†.....	81	29	52.0	7.60	Fort Madison*†.....	86	22	45.6	4.04
Louisville†.....	70	20	48.6	3.27	Galva†.....	80	22	49.6	4.26
Manchester†.....	78	28	50.1	7.84	Glenwood†.....	70	20	43.0	5.18
Martinsville*†.....	83	30	52.8	8.95	Grand Meadow†.....	73	22	45.1	5.35
Mascatiah†.....	83	30	52.8	8.95	Greenfield†.....	70	20	43.0	5.18
Mattoon†.....	87	27	54.3	7.50	Grinnell†.....	68	23	46.1	2.98
McLeansboro†.....	84	35	58.8	6.40	Grundy Centre*†.....	68	24	44.8	4.49
Mount Carmel†.....	84	35	58.8	6.40	Hampton†.....	67	20	42.1	6.62
Muddy Valley†.....	84	35	58.8	6.40	Havelock†.....	62†	21†	41.2†	5.02
New Haven†.....	81	30	54.6	7.85	Hawk Eye†.....	71	24	46.2	3.94
Olney†.....	85	26	50.4	7.73	Hopeville†.....	71	24	46.2	3.94
Olney†.....	85	26	50.4	7.73	Hopkinton†.....	72	22	43.7	3.24
Oswego†.....	78	24	43.7	3.45	Independence*†.....	71	20	43.7	3.24
Ottawa†.....	82	23	46.4	3.56	Indianola†.....	70	24	48.7	3.90
Palestine†.....	83	28	53.8	9.18	Iowa City†.....	72	22	46.9	4.30
Pana†.....	84	33	53.1	11.99	Iowa Falls†.....	70	20	42.8	5.49
Paris†.....	75	26	48.0	7.50	Keosauqua†.....	72	26	49.2	7.18
Peoria†.....	77	27	51.0	4.85	Larabee†.....	78	18	43.7	5.22
Peoria†.....	77	27	51.0	4.85	Le Claire†.....	84	34	49.3	4.91
Philo†.....	82	26	49.5	7.79	Logan†.....	72	28	44.7	6.22
Quincy†.....	82	24	48.1	6.04	McCausland†.....	72	23	45.3	5.93
Rantoul†.....	78	22	44.2	2.83	Maquoketa†.....	70	21	44.7	3.53
Riley†.....	75	25	44.8	4.71	Marshalltown†.....	76	28	53.1	5.08
Rockford†.....	78	24	51.0	7.68	Maxon†.....	72	22	45.1	4.08
Rushville†.....	85	34	55.0	5.98	Mechanicville†.....	74	19	44.6	2.70
Saint John†.....	77	26	44.4	4.81	Monticello*†.....	73	26	47.8	6.55
Shawneetown†.....	82	23	49.2	4.06	Moor†.....	71	22	46.1	5.06
Sycamore†.....	77	26	44.4	4.81	Mount Pleasant*†.....	73	22	46.6	4.15
Walnut†.....	82	23	49.2	4.06	Mount Pleasant*†.....	73	22	46.6	4.15
Warsaw†.....	77	26	44.4	4.81	Murray†.....	74	24	46.8	7.15
Watseka†.....	76	25	52.4	4.40	Muscataine†.....	74	24	47.9	4.31
White Hall†.....	76	25	52.4	4.40	Osgo†.....	71	31	41.6	4.16
Winnetago*†.....	76	24	43.8	4.40	Oskaloosa†.....	71	35	46.7	3.07
<i>Indiana.</i>					Panama†.....	80	34	45.9	3.87
Angola†.....	74	22	43.4	3.86	Richland†.....	73	33	42.5	5.03
Ashboro†.....	77	26	48.8	7.87	Spirit Lake†.....	67	33	42.5	5.03
Bethelville†.....	77	26	48.8	7.87	Storm Lake†.....	74	22	44.1	5.43
Cambridge City†.....	79	22	49.5	5.96	Tipton†.....	74	22	44.1	5.43
Columbia City†.....	79	22	49.5	5.96	Vinton†.....	68	33	45.1	5.01
Columbus†.....	80	28	50.2	5.74	Washington†.....	76	35	49.8	3.70
Connersville†.....	80	23	48.7	6.51	Webster City*†.....	64	34	42.9	5.68
De Gonia Springs†.....	80	29	56.0	8.79	West Bend†.....	62	33	42.1	3.45
Evansville†.....	80	29	56.0	8.79	Williams†.....	73	25	45.8	4.03
Farmland†.....	80	29	56.0	8.79	Winterset†.....	73	25	45.8	4.03
Franklin†.....	75	29	50.9	3.69	<i>Kansas.</i>				
Hammond†.....	79	15	43.6	4.00	Abilene†.....	91	33	54.9	1.37
Hawpach†.....	73	37	48.6	4.90	Allison†.....	91	25	48.4	1.37
Huntington†.....	73	37	48.6	4.90	Altoona*†.....	84	32	53.7	2.68

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
<i>Kansas—Cont'd.</i>				<i>Ins.</i>	<i>Kentucky—Con.</i>				<i>Ins.</i>
Antelope†.....	90	19	52.7	0.84	Shelbyville†.....	83	24	53.8	6.38
Arkalon†.....	94	24	55.0	0.31	South Fork†.....	83	23	53.7	6.75
Atchison†.....	87	20	51.9	2.95	Springfield†.....	83	23	53.7	6.75
Belleville†.....	78	18	54.2	2.10	Wickliffe*†.....	83	36	57.8	5.44
Bucklin†.....	83	23	53.3	0.45	Williamsburg†.....	83	36	57.8	5.44
Buffalo Park†.....	83	23	53.3	0.45	<i>Louisiana.</i>				
Burr Oak†.....	88	18	58.1	1.38	Abbeville†.....	89	45	70.0	7.00
Cawker City†.....	86	28	50.7	1.40	Alexandria†.....	87	43	65.4	7.56
Coldwater†.....	90	26	54.6	0.22	Amit City†.....	86	46	72.0	7.31
Collyer†.....	94	29	56.6	1.25	Baton Rouge.....	84	39	68.0	9.85
Columbus†.....	86	27	54.7	5.30	Cameron†.....	89	42	67.0	3.43
Cunningham†.....	96	18	52.9	0.27	Cheneyville†.....	86	44	70.4	8.84
Downs†.....	86	26	53.7	1.10	Clinton†.....	91	55	73.8	8.00
Elco†.....	86	26	53.7	1.10	Coushatta†.....	86	46	69.7	8.24
Elk Falls†.....	90†	35†	53.8†	0.51	Coushatta†.....	91	40	68.2	7.26
Ellis†.....	84	30	53.5	2.60	Delhi†.....	86	46	69.7	8.24
Emporia†.....	84	30	53.5	2.60	Donaldsonville.....	86	46	69.7	8.24
Englewood†.....	89	30	55.6	0.28	Emilie†.....	86	43	69.0	9.69
Eureka Ranch†.....	95	19	49.8	0.92	Farmerville.....	88	45	66.7	9.10
Fort Riley†.....	94	30	53.2	1.98	Girard†.....	88	45	66.7	9.10
Fort Scott†.....	91	24	50.0	4.40	Grand Cane.....	88	45	66.7	9.10
Gibson†.....	94	23	50.0	1.74	Grand Coteau.....	84	50	69.8	3.34
Gove City†.....	91	30	50.4	0.80	Hammond.....	88	42	70.6	6.95
Grainfield†.....	86	28	49.8	0.27	Houma†.....	88	42	70.6	6.95
Greensburg†.....	89	25	52.2	0.21	Jeanerette.....	88	46	70.0	8.96
Greenola†.....	83	26	55.8	0.55	La Fayette†.....	84	45	67.8	5.51
Grinnell†.....	90	30	53.6	0.62	Lake Charles.....	87	40	64.4	0.58

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
<i>Massachusetts—Con.</i>					<i>Michigan—Cont'd.</i>				
Heath * ¹	76	20	41.8	Ins.	Rawsonville.....	75	23	46.4	Ins.
Hyannis * ¹	68	26	48.2	2.27	Rockland * ¹	63	13	34.8	1.86
Kendall Green.....	74	26	47.4	0.77	Saint Ignace.....	53	14	35.6	1.08
Lake Cochituate.....	81	17	47.0	0.78	Sand Beach.....	70	21	39.0	0.61
Lawrence.....	76	23	48.0	0.60	Standish.....	74	19	41.3	2.60
Leicester.....	71	22	43.0	0.38	Stockbridge.....	74	21	41.3	2.51
Leominster.....	71	22	43.0	0.63	Thornville * ¹	74	23	44.4	1.72
Long Plain.....	76	25	46.9	2.29	Vandalia.....	74	21	45.5	2.61
Lowell * ¹	73	24	45.4	0.63	Vienna.....	73	18	43.0	1.98
Lowell * ²	77	21	48.1	0.63	Washington.....	73	18	43.0	1.12
Ludlow * ¹	75	17	42.6	0.85	Weldon Creek.....	72	16	41.2	1.80
Lynn.....	73	27	47.1	0.65	White Pigeon * ²	74	15	42.8	3.54
Mansfield * ¹	78	27	42.6	1.45	Williamston * ¹	67	25	46.5	2.97
Medford.....	75	20	45.7	0.84	Ypsilanti.....	72	26	46.4	1.53
Middleborough.....	75	20	45.7	1.84	<i>Minnesota.</i>				
Milton.....	77	27	45.4	0.73	Albert Lea * ¹	67	17	41.6	3.31
Monroe.....	68	19	40.3	1.37	Alexandria * ¹	67	18	41.8	2.01
Monson.....	77	22	46.0	0.44	Alma City * ¹	67	18	41.8	2.07
Mount Nonotuck.....	77	22	46.0	0.75	Bingham Lake * ¹	63	16	41.4	3.92
Mystic Lake.....	77	22	46.0	0.89	Bird Island * ²	68	10	39.4	2.87
Mystic Station.....	77	22	46.0	0.92	Caledonia * ¹	70	12	42.0	3.63
Nahant.....	73	30	45.4	0.92	Camden * ¹	69	14	41.5	3.37
New Bedford * ¹	72	26	44.1	2.35	Clear Lake.....	61	19	41.2	3.19
New Bedford * ²	75	22	45.9	2.29	Crookston * ¹	68	12	37.2	1.95
Newburyport * ¹	77	26	47.1	0.60	Eagle Bend * ¹	60	7	37.4	2.80
Northampton.....	76	26	47.6	0.64	Easton * ¹	68	15	41.2	2.00
North Billerica.....	76	24	48.2	0.50	Farmington * ¹	72	20	42.8	1.09
Plymouth * ¹	78	34	47.9	1.26	Fergus Falls * ¹	72	20	42.8	1.09
Princeton.....	76	20	44.9	1.26	Fort Ripley * ¹	71	17	41.8	3.27
Provincetown.....	66	26	45.7	1.37	Granite Falls.....	71	17	41.8	3.27
Randolph.....	76	20	45.7	0.80	Kinbrae * ¹	66	22	40.0	4.43
Roberts Dam.....	77	28	48.2	0.89	L Winnibigoshish * ¹	64	10	35.0	2.87
Roxbury * ¹	77	28	48.2	0.87	Leech Lake * ¹	61	3	35.9	2.62
Royalston.....	70	28	48.4	1.00	Maple Plain * ²	67	17	40.0	1.26
Salem * ¹	68	16	38.5	0.63	Minneapolis * ¹	64	18	41.9	0.68
Savoy.....	68	16	38.5	0.63	Montevideo * ¹	73	16	41.6	4.68
South Hingham.....	80	23	49.0	1.69	Morris * ¹	67	15	39.8	3.87
Springfield Arm'y.....	76	26	47.4	0.91	Northfield * ¹	65	17	41.8	2.01
Taunton * ¹	80	26	47.4	1.86	Ortonville * ¹	65	17	41.8	2.01
Taunton * ²	79	25	47.8	1.47	Pine River * ¹	62	12	34.5	2.51
Taunton * ³	79	22	46.0	1.40	Pokegama Falls * ¹	65	3	35.5	2.69
Taunton * ⁴	81	25	46.0	1.06	Princeton * ¹	65	14	41.6	2.13
Turners Falls.....	74	25	46.4	0.55	Redwood Falls * ¹	65	14	41.6	2.13
Wakefield.....	77	22	47.4	0.65	Rolling Green * ¹	63	19	39.4	3.23
Westley.....	73	21	44.9	0.83	Saint Charles * ¹	66	19	41.6	3.78
Westborough * ¹	77	23	48.0	0.70	Sheldon * ²	64	24	42.6	3.78
Williamstown * ¹	72	21	43.4	0.40	<i>Mississippi.</i>				
Winchester.....	72	21	43.4	0.74	Aberdeen * ¹	86	34	65.8	3.25
<i>Michigan.</i>					Agricultural Col'ge.....	85	42	64.3	9.75
Adrian.....	76	23	45.1	3.02	Batesville * ¹	86	40	64.3	9.75
Allegan.....	77	17	45.2	2.87	Bay Saint Louis * ¹	84	52	69.6	14.39
Alma.....	73	16	43.5	2.11	Booneville * ¹	85	44	65.8	6.70
Arbela.....	70	24	47.3	2.64	Brookhaven * ¹	87	34	66.8	6.70
Ball Mountain.....	71	21	47.2	1.61	Canton * ¹	85	44	65.6	5.82
Bear Lake.....	70	16	40.8	1.55	Columbus * ¹	87	38	68.4	2.08
Bellaire.....	69	9	36.2	0.41	Columbus * ²	87	38	68.4	2.08
Benton Harbor.....	80	21	46.7	3.26	Crystal Springs * ¹	87	38	68.4	2.08
Bensonia.....	70	17	38.9	1.68	Edwards * ¹	87	43	66.4	5.62
Berlin * ¹	73	16	41.8	1.45	Enterprise * ¹	86	42	67.2	7.93
Berlin Springs * ¹	73	16	41.8	1.45	Fayette * ¹	86	42	67.2	7.93
Berrien Springs * ¹	73	16	41.8	1.45	Greenville.....	85	46	64.4	9.74
Birch Run.....	73	20	43.5	2.55	Haslehurst * ¹	89	39	66.3	2.26
Birmingham.....	73	23	43.4	4.85	Holly Springs * ¹	84	42	64.0	2.75
Bronson.....	77	17	44.0	2.58	Jackson * ¹	88	44	74.9	1.31
Brown City.....	72	20	41.6	2.52	Kosciusko * ¹	87	39	64.2	12.60
Caldwell.....	70	12	38.4	1.52	Lake * ¹	88	44	70.6	0.57
Calumet.....	55	14	32.8	1.25	Logtown * ¹	84	44	68.2	8.45
Charlevoix.....	67	18	37.4	1.25	Louisville * ¹	89	34	62.0	7.84
Clinton.....	76	22	43.9	2.23	Macon * ¹	90	44	68.8	1.49
Concord.....	76	20	43.8	2.40	Moos Point * ¹	83	44	66.6	4.86
Crystal Falls.....	52	11	33.1	1.66	Natchez * ¹	87	44	68.2	4.71
Evart.....	72	16	43.4	1.76	Okolona * ¹	88	38	66.6	0.94
Fairview.....	72	16	43.4	1.76	Pontotoc * ¹	85	37	63.0	10.13
Fitchburg.....	72	19	43.1	2.15	Port Gibson * ¹	80	39	67.5	7.47
Flint.....	69	13	42.2	1.93	Ship Island * ¹	81	48	68.4	8.03
Fremont.....	74	13	44.0	2.81	Vaiden * ¹	92	38	65.2	13.72
Gaylord.....	67	11	37.8	1.99	Washington * ¹	88	43	67.8	7.47
Gladwin.....	75	16	41.9	0.60	Water Valley * ¹	90	40	62.4	9.50
Grape.....	74	23	46.1	1.47	Waynesborough * ¹	86	37	65.0	3.84
Grayling.....	72	9	38.2	0.92	Waynesborough * ²	88	38	68.2	3.60
Hanover.....	73	22	45.0	3.19	Yazoo City * ¹	88	38	68.2	11.23
Harbor Springs.....	74	12	37.8	2.04	<i>Missouri.</i>				
Harrison.....	71	17	40.7	0.70	Adrian * ¹	83	17	48.6	7.35
Harrisville.....	68	13	37.1	1.71	Appleton City * ¹	85	30	55.6	5.48
Hart.....	70	24	45.4	1.65	Boonville * ¹	85	30	55.6	5.48
Hastings.....	74	20	44.0	3.15	Brunswick * ¹	77	28	51.6	2.90
Highland Station.....	72	20	43.2	1.75	Cape Girardeau * ¹	77	28	51.6	2.90
Hillman.....	55	10	33.6	1.25	Carrollton * ¹	77	29	50.9	6.35
Hillsdale * ¹	70	22	44.2	2.91	Carthage * ¹	85	34	54.7	5.67
Howell.....	73	18	43.6	1.67	Chillicothe * ¹	81	38	52.4	5.83
Ivan.....	70	13	38.3	2.00	Clinton * ¹	80	30	53.4	5.15
Jeddo.....	73	31	41.2	2.40	Conception * ¹	70	27	49.9	2.50
Kalamazoo.....	74	24	46.7	2.59	Concordia * ¹	80	50	50.0	5.45
Lansing * ¹	73	20	44.4	2.40	Darksville * ¹	78	28	54.8	5.59
Lathrop * ¹	58	16	34.5	1.58	Dunnegan.....	78	28	54.8	5.59
McMillan.....	57	18	34.2	2.05	East Lynne * ¹	81	28	52.5	5.23
Madison.....	75	22	45.2	2.12	Eldon * ¹	80	28	52.9	7.19
Marshall * ¹	75	18	45.1	1.70	Excelsior Springs * ¹	81	24	51.7	5.76
May.....	71	20	43.1	3.26	Fayette.....	80	29	54.5	6.21
Mio.....	72	16	36.0	1.03	Fox Creek * ¹	84	34	54.5	6.50
Montague.....	71	22	41.8	3.22	Gordonville * ¹	83	32	57.7	8.68
Mottville.....	79	17	45.6	2.52	Harris * ¹	79	30	50.1	3.41
Noble.....	70	24	45.0	3.22	Harrisonville * ¹	80	30	49.2	5.07
Ovid.....	74	21	42.4	3.01	Hermann * ¹	80	34	54.6	6.76

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
<i>Missouri—Cont'd.</i>					<i>Nebraska—Con.</i>				
Jefferson City †.....	88	32	55.8	6.58	Seward * ¹	74	30	49.4	3.52
Jerome †.....	80	30	52.5	5.18	Springview.....	74	19	43.6	7.23
Kansas City.....	80	30	52.5	4.32	Superior * ¹	78	28	45.9	2.43
Kidder.....	78	32	50.2	3.77	Syracuse * ¹	76	32	49.1	4.67
Lamar †.....	90	29	56.8	5.58	Tecumseh †.....	78	29	49.5	6.05
Lamotte b * †.....	80	26	48.6	4.62	Tekamah.....	87	20	49.3	5.18
Langdon.....	78	26	48.6	4.67	Weeping Water * ¹	76	21	47.6	5.48
Lebanon.....	80	28	55.4	4.40	West Hill * ¹	88	26	44.8	3.46
Liberty.....	81	31	54.4	4.45	West Point * ¹	86	24	46.4	3.93
Louisiana Bridge †.....	81	30	56.9	7.22	Whitman * ¹	73	12	40.1	6.80
Mansfield.....	81	30	56.9	7.86	Wilcox a.....	94	31	49.0	3.10
Marble Hill.....	81	30	56.9	6.19	Wilcox b * ¹	94	31	49.0	3.78
Marshall †.....	85	27	54.4	5.79	<i>Nevada.</i>				
Mexico †.....	85	30	56.2	8.24	Austin.....	62	14	39.5	1.34
Mine La Motte.....	88	28	57.8	3.68	Battle Mountain * ¹	74	32	47.6	2.55
Neosho.....	86	32	53.8	3.50	Belleville * ¹	72	30	47.7	0.02
Nick Ridge * ¹	87	32	58.5	6.80	Belmont.....	61	14	40.2	0.19
Oregon * ¹	78	28	50.3	3.13	Beowawe * ¹	70	27	43.8	0.47
Oregon b †.....	79	28	49.3	2.73	Browns * ¹	78	30	54.0	0.25
Phillipsburgh.....	68	27	44.2	7.93	Carlin * ¹	77	22	39.0	0.20
Pickering.....	80	28	48.3	3.93	Carson City †.....	72	20	43.5	0.48
Platte River * ¹	75	27	50.2	6.10	Cranes Ranch.....	84	20	30.6	0.08
Princeton †.....	73	27	50.0	3.62	Downeyville.....	80	26	43.4	0.00
Rea * ¹	85	32	55.6	8.51	Eureka.....	75	10	40.4	0.25
Rolla †.....	85	32	55.6	8.51	Penelon * ¹	80	28	46.7	0.30
Saint Joseph †.....	82	29	53.6	7.03	Genoa.....	73	24	46.2	1.35
Saint Louis.....	85	27	53.4	5.18	Goldconda * ¹	68	28	45.7	0.95
Sedalia.....	82	27	53.4	5.90	Halleck †.....	64	34	36.3	1.34
Shelbina.....	82	30	53.2	3.68	Hawthorne a * ¹	72	38	52.1	0.10
Stanberry.....	82	26	54.0	5.68	Hawthorne b.....	75	23	49.0	0.10
Stellada †.....	85	32	53.6	4.35	Hot Springs * ¹	69	25	46.0	0.35
Warrensburg * ¹	82	27	52.6	5.24	Humboldt * ¹	70	30	46.5	0.50
Warrenton.....	74	30	52.0	4.86	Lewers Ranch.....	68	21	43.4	2.04
Withers Mills * ¹	68	27	47.5	9.14	Lovelock * ¹	72	30	47.9	0.00
Zaitonia.....	65	10	36.4	1.13	McDermitt.....	83	38	54.6	3.17
<i>Montana.</i>					Mill City * ¹	65	29	46.3	0.69
Boulder Valley †.....	68	5	40.2	0.32	Monitors Ranch.....	67	6	41.6	0.40
Bozeman †.....	65	11	40.0	2.32	Palisade * ¹	68	25	45.0	1.00
Camp Poplar River.....	71	12	37.4	1.50	Palmetto.....	74	13	43.3	2.80
Choteau †.....	65	10	36.4	1.13	Pioche.....	75	14	48.2	0.64
Cokedale.....	56	10	34.8	1.57	Reno * ¹	72	28	51.7	0.10
Dearborn Canyon †.....	67	10	38.8	1.23	Reno State Univ * ¹	70	23	44.8	0.09
Deer Lodge City †.....	78	18	44.2	1.88	Saint Clair.....	74	25	48.6	0.26
Fort Keogh.....	60	7	35.7	1.57	South Camp †.....	73	12	43.2	0.39
Fort Logan †.....	65	20	40.5	1.57	Sunnyside.....	77	10	45.7	0.20
Fort Missoula.....	76	15	43.8	2.27	Tecoma * ¹	70	29	44.2	0.52
Glendive †.....	78	14	45.8	1.89	Toano * ¹	65	23	43.8	0.28
Great Falls †.....	66	21	40.5	0.80	Tuscarora †.....	67	10	40.9	1.01
Fort Totten.....	66	12	37.8	1.76	Tybo.....	67	16	45.1	1.07
Livingston †.....	68	9	38.9	1.76	Verdi * ¹	64	22	42.0	1.09
Martindale †.....	69	12	34.0	1.60	Virginia City.....	66	21	42.8	0.76
Virginia City †.....	68	12	34.0	1.60	Wabaska * ¹	76	34	50.4	0.05
<i>Nebraska.</i>					Wadsworth * ¹	76	24	42.6	0.00
Algoe * ¹	73	34	47.5	5.62	Wells * ¹	64	28	43.7	0.10
Albion †.....	88	27	47.2	2.98	Winnemucca * ¹	66	28	44.1	0.00
Allamore †.....	77	11	41.2	4.27	<i>New Hampshire.</i>				
Ansley †.....	93	16	46.8	3.03	Antrim.....	67	13	38.6	0.94
Arberville * ¹	92	25	46.1	3.66	Belmont.....	66	12	39.4	0.70
Auburn a * ¹	82	22	49.0	4.86	Berlin Falls.....	61	12	45.7	0.76
Aussett * ¹	73	22	43.8	4.04	Berlin Mills.....	66	12	45.7	0.70
Beatrice †.....	80	26	47.4	4.82	Concord a.....	65	20	43.2	0.82
Brandon.....	82	24	44.2	3.23	East Canterbury.....	65	20	43.2	0.82
Burwell * ¹	82	24	44.2	3.23	Groveton * ¹	66	21	38.8	1.32
Freighton * ¹	82	24	44.2	3.23	Hanover a.....	64	22	42.3	0.95
Frete †.....	85	23	47.9	3.49	Lakeport.....	64	15	39.4	1.20
Hubertson a †.....	87	24	49.6	4.72	Littleton.....	73	22	46.1	0.70
Le Soto * ¹	87	24	49.6	4.72	Manchester †.....	64	15	39.4	1.20
Lunning * ¹	84	22	44.4	3.31	Mine Falls.....	76	22	46.5	0.51
Mason * ¹	84	22	44.4	3.31	Nashua.....	74	29	45.2	0.56
Twins * ¹	84	22	44.4	3.31	Newton.....	71	18	42.3	0.44
Airbury * ¹	77	25	46.1	3.60	North Conway.....	70	18	42.0	0.45
Airfield * ¹	87	20	48.4	3.60	Peterborough.....	68	18	42.0	0.45
Albany City * ¹	74	32	51.8	2.98	Plymouth †.....	73	14	42.2	0.90
Port Robinson.....	74	10	41.8	3.53	Walpole.....	71	19	43.2	0.60
Port Sidney.....	80	17	44.4	4.05	West Milan.....	69	8	38.9	0.69
Franklin.....	91	20	49.5	1.51	Wiers Bridge.....	69	8	38.9	0.69
Remont * ¹	87	24	47.6	3.13	Wolfborough.....	69	8	38.9	0.69
Geneva.....	85	28	46.0	4.05	<i>New Jersey.</i>				
Genoa †.....	70	22	41.1	3.71	Allaire.....	84	19	47.9	0.00
Griffin †.....	98	28	51.6	2.49	Asbury Park.....	80	28	49.6	2.78
Grand Island.....	90	30	47.7	2.05	Bayonne.....	84	27	49.8	2.36
Gratington †.....	70	15	44.0	4.76	Belleville.....	82	25	46.9	1.56
Harvard †.....	79	26	46.9	3.10	Belvidere.....	84	27	49.8	2.40
Hastings * ¹	72	30	49.8	2.00	Beverly †.....	82	24	45.4	1.10
Hayes Centre * ¹	99	30	44.5	2.34	Blairstown.....	80	32	51.6	3.58
Holmden * ¹	88	27	47.9	2.06	Bridgetown a.....	82	32	52.5	3.18
Hopewell * ¹	88	23	46.2	3.75	Bridgetown b.....	85	31	51.3	2.31
Humboldt * ¹	72	21	42.1	5.42	Cape May C. H. †.....	81	30	50.0	4.41
Imperial †.....	83	16	43.9	4.93	Deckerton.....	81	23	47.4	1.05
Lexington †.....	82	3	47.4	3.80	Dover.....	82	19	46.8	1.24
Lincoln †.....	82	24	48.4	3.80	Egg Harbor City †.....	82	24	48.8	3.23
Long Pine * ¹	82	10	50.0	7.00	Elizabeth †.....	82	26	48.8	2.34
Marquette.....	93	31	46.3	3.69	Franklinville.....	81	22	49.4	3.37
Marion * ¹	90	28	46.3	2.07	Freehold.....	84	27	49.4	2.99
Nebraska City †.....	76	32	50.4	3.53	Gillette.....	80	27	49.9	2.17
Norfolk †.....	84	20	44.9	3.93	Highland Park †.....	81	27	48.8	2.58
North Loup * ¹	88	18	45.2	3.59	Imlaystown.....	84	27	50.6	2.47
Nokle * ¹	85	18	43.3	3.51	Junction.....	82	29	49.6	2.22
Neill * ¹	80	22	44.3	3.83	Lambertville.....	83	24	48.4	2.28
Nichols * ¹	90	24	43.7	3.01	Locktown.....	81	28	49.4	2.53
Palmer * ¹	90	24	43.7	3.01	Moorestown †.....	81	28	49.4	2.53
Patamouth †.....	91	30	47.2	2.78					

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
New Jersey—Cont'd.				Ins.	New York—Cont'd.				Ins.
Mount Holly.....	81	30	51.4	.....	Schock Depot.....	78	29	47.4	0.65
Newark.....	80	25	48.9	3.53	Setauket f.....	75	15	41.2	1.19
Newark.....	80	25	48.9	2.31	Sherman f.....	75	15	41.2	1.19
New Brunswick.....	85	25	50.9	2.56	South Canisteo f.....	75	15	41.2	1.19
New Brunswick.....	82	25	48.2	2.50	South Canisteo f.....	75	15	41.2	1.19
Newton f.....	82	23	46.8	1.18	South Kortright f.....	79	13	40.9	0.77
Ocean City f.....	77	33	48.4	3.04	Turin.....	68	17	38.7	1.83
Ocean City f.....	60	31	52.3	3.09	Utica.....	75	10	44.4	2.14
Paterson.....	87	26	51.4	1.87	Victor.....	78	19	44.1	0.86
Rancocas f.....	83	30	47.0	2.27	Wappingers Falls.....	.....	.....	.....	.....
Readington f.....	76	30	50.4	.....	West Chazy.....	.....	.....	.....	.....
Somerville.....	83	19	49.8	2.07	West Point.....	80	29	48.0	1.09
Tenafly.....	86	23	49.0	1.55	White Plains f.....	72	32	46.6	2.44
Trenton f.....	82	30	52.0	2.77	Willets Point.....	80	30	48.8	2.44
Vineland.....	81	25	50.4	3.75	North Carolina.				
Whiting.....	86	24	50.4	2.78	Asheville f.....	76	26	53.8	6.01
New Mexico.					Bakersville f.....	76	22	51.0	4.90
Albany f.....	84	22	56.7	0.77	Bryson City f.....	84	27	57.0	7.86
Albuquerque f.....	81	33	57.2	0.20	Chapel Hill f.....	84	27	57.0	7.86
Bloomfield f.....	81	14	47.0	0.12	Columbus.....	73	20	52.8	3.58
Chama f.....	73	1	41.0	1.26	Concord.....	84	27	57.8	4.35
Coolidge f.....	82	20	48.0	1.06	Currituck Inlet f.....	85	23	54.9	2.52
Deming f.....	87	25	68.0	0.10	Douglas.....	85	23	54.9	2.52
Dulce f.....	75	11	41.3	1.20	Fayetteville f.....	86	34	58.2	1.99
East Las Vegas f.....	81	17	50.1	0.41	Goldsborough f.....	75	42	57.2	1.13
Embudo.....	84	22	52.3	0.09	Greensborough f.....	75	30	54.7	6.85
Folsom f.....	80	15	51.0	1.15	Hendersonville f.....	72	23	52.4	7.30
Fort Bayard.....	81	24	51.0	0.30	Horse Cove.....	77	29	54.1	3.10
Fort Wingate.....	71	14	45.6	1.05	Lenoir f.....	62	22	47.1	3.75
Gallinas Spring f.....	86	26	56.4	0.14	Linville f.....	80	29	54.3	4.86
Halls Peak f.....	73	0	42.7	0.22	Louisburgh f.....	85	32	62.3	1.50
Hillsborough f.....	85	24	57.0	0.22	Lumberton f.....	80	25	55.6	2.80
Lordsburg f.....	85	20	53.6	0.00	Marion.....	79	31	55.8	4.05
Los Lunas f.....	85	20	53.6	0.00	Morgantown f.....	77	22	53.2	2.65
Monero f.....	75	23	47.0	0.37	Mount Airy f.....	80	26	56.6	3.40
Ollo f.....	78	22	47.0	0.37	Mount Holly f.....	80	26	56.6	3.40
Pojuaque.....	84	19	53.2	T.	Mount Pleasant.....	80	26	56.6	3.40
Red Canyon f.....	84	19	53.2	T.	Murphy f.....	80	26	56.6	3.40
Socorro f.....	84	19	53.2	T.	New Bern f.....	80	26	56.6	3.40
Springer f.....	84	19	53.2	T.	Oak Ridge f.....	79	26	54.8	3.08
Taos f.....	84	19	53.2	T.	Pittsborough.....	79	26	54.8	3.08
Wallace f.....	84	19	53.2	T.	Salisbury.....	76	23	55.5	4.01
New York.					Saxon f.....	82	23	55.5	4.01
Adams Centre.....	75	20	43.8	0.98	Smithfield.....	78	30	59.0	3.00
Addison.....	75	20	43.8	0.98	Soapstone M f.....	84	30	59.0	3.00
Afton.....	75	20	43.8	0.98	Southern Pines f.....	84	30	59.0	3.00
Akron.....	75	20	43.8	0.98	Tarborough.....	84	30	59.0	3.00
Alfred Centre.....	74	13	39.8	0.55	Wadeville f.....	80	30	55.0	2.15
Arden f.....	74	13	39.8	0.55	Weldon f.....	84	28	55.5	5.00
Au Sable Forks.....	74	13	39.8	0.55	Wilkesville f.....	84	28	55.5	5.00
Avon.....	74	13	39.8	0.55	North Dakota.				
Baldwinsville f.....	75	23	43.7	1.05	Ashley f.....	61	13	36.3	3.12
Bedford.....	75	23	43.7	1.05	Bathgate f.....	67	11	35.4	1.30
Bethlehem Centre.....	75	23	43.7	1.05	Bottineau f.....	65	10	35.8	1.05
Binghamton f.....	76	19	43.1	1.13	Churches Ferry f.....	70	14	37.5	2.17
Boyd's Corners f.....	78	30	49.1	1.08	Dickinson f.....	70	10	37.5	3.60
Brentwood.....	77	23	46.9	3.70	Ellendale f.....	64	22	37.6	4.50
Brookport.....	79	22	43.9	1.11	Fargo f.....	68	27	41.2	2.42
Brookfield f.....	70	15	40.0	0.67	Forman f.....	71	15	42.5	2.85
Canaseraga.....	74	15	42.4	0.88	Fort Stevenson f.....	66	10	38.2	1.67
Canton f.....	73	19	41.3	1.37	Fort Yates.....	66	18	41.0	4.00
Carmel.....	80	24	46.4	0.95	Gallatin f.....	62	10	34.0	2.30
Cherry Creek.....	75	23	43.7	1.05	Grafton f.....	62	10	34.0	2.30
Constableville f.....	68	11	37.6	2.18	Grand Forks f.....	61	17	35.7	3.90
Coopersville f.....	73	30	41.3	1.38	Grand Rapids f.....	67	12	36.8	4.07
De Kalb Junction.....	73	30	41.3	1.38	Hope f.....	64	12	36.0	1.00
Deposit.....	73	30	41.3	1.38	Jamestown f.....	69	12	37.6	4.24
Dunkirk f.....	77	12	42.9	2.08	Lakota f.....	63	10	34.1	0.88
Eden Centre.....	77	12	42.9	2.08	Medora f.....	74	12	43.1	1.56
Factoryville f.....	77	16	43.8	0.87	Milton f.....	68	16	36.4	2.18
Fleming f.....	74	30	42.9	0.75	Minot f.....	65	10	35.8	1.35
Fort Niagara.....	70	23	44.5	0.51	Napoleon f.....	65	16	34.8	5.30
Geneva f.....	79	20	43.1	1.28	Power f.....	68	15	38.6	2.97
Glens Falls.....	75	19	44.6	0.73	Saint John f.....	60	9	32.4	2.78
Hammondsport.....	75	23	45.4	0.84	Valley City f.....	66	15	37.9	3.54
Hess Road Stat'n f.....	73	16	43.0	1.02	White Earth f.....	65	18	41.0	3.20
Honeybrook Brook f.....	77	21	45.4	0.71	Wild Rice f.....	75	10	33.6	1.49
Humphrey f.....	75	16	42.2	1.48	Willow City f.....	72	13	36.8	1.02
Ithaca f.....	75	21	44.9	1.25	Woodbridge f.....	70	7	35.4	2.21
Jamestown f.....	74	23	44.2	.....	Ohio.				
Letanion Springs.....	71	18	42.7	0.84	Akron f.....	76	25	47.3	1.47
Le Roy.....	76	17	41.4	1.47	Ashland f.....	77	23	46.0	2.66
Lockport.....	77	18	43.5	1.06	Athens f.....	81	30	51.0	3.66
Lowville f.....	77	18	43.5	1.06	Bangorville f.....	75	21	46.4	2.39
Lyndonville.....	77	18	43.5	1.06	Bellevue f.....	74	24	44.7	3.40
Madison Barracks.....	77	18	43.5	1.06	Bement.....	83	23	46.0	2.99
Malone f.....	77	18	43.5	1.06	Caledonia f.....	74	24	44.7	3.40
Middletown.....	79	25	47.8	1.48	Canton f.....	78	24	47.4	2.30
Minnewaska.....	71	20	41.4	0.55	Carrollton.....	78	19	46.0	1.96
Mount Morris.....	79	16	43.4	0.04	Celina f.....	80	24	50.6	4.37
Newark Valley.....	79	16	43.4	0.04	Circleville f.....	79	23	50.2	5.10
New Lisbon f.....	75	16	39.6	1.25	Cleveland f.....	78	28	46.7	2.26
N'th Hammond f.....	68	22	40.3	1.89	Dayton f.....	80	24	51.5	3.76
Number Four f.....	66	13	37.5	1.77	Demos f.....	76	23	49.0	1.49
Oxford.....	70	18	41.1	1.74	Elyria.....	76	20	46.0	3.30
Palermo f.....	73	23	41.6	1.09	Findlay f.....	78	25	47.1	4.18
Pawling.....	73	23	41.6	1.09	Postoria f.....	76	23	47.6	4.12
Perry City f.....	71	18	39.6	1.65	Garrettsville f.....	77	20	45.4	2.17
Plattsburgh f.....	66	17	40.9	0.97	Georgetown f.....	82	29	53.1	4.67
Port Jervis.....	80	23	47.3	1.27	Granville f.....	78	21	49.0	2.48
Potsdam f.....	70	17	40.3	1.03					
Poughkeepsie.....	82	19	46.1	0.60					
Quaker Street.....	75	18	41.5	0.85					
Rome.....	75	20	43.1	1.69					
Romulus f.....	75	20	43.1	1.69					

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
Ohio—Cont'd.	°	°	°	Ins.	Oregon—Cont'd.	°	°	°	Ins.
Gratiot.....	78	22	50.2	2.46	Portland *1.....	70	32	45.9	4.84
Greenfield.....	78	27	51.0	4.16	Riddle *1.....	78	30	50.7	3.12
Greenville *1.....	77	23	48.8	4.87	Roseburg *1.....	74	36	47.3	2.73
Hanging Rock *1.....	83	21	52.2	4.00	Salem a *1.....	69	31	45.5	4.37
Harbor *1.....	77	25	46.6	1.26	Salem b.....	78	29	47.7	4.78
Hassan *2.....	76	26	45.1	4.40	Sheridan *1.....	70	25	49.4	4.38
Hiram *1.....	75	22	44.4	1.99	Silver Lake *1.....	73	14	41.8	0.77
Jacksonborough.....	80	30	49.0	5.45	Silverton *1.....	72	42	48.1	4.43
Kenton *1.....	83	30	48.4	4.18	Siskiyou *1.....	63	30	40.8	3.69
Leipsic.....	76	22	46.0	4.22	Sparta.....	60	22	38.9	2.24
Logan *1.....	82	30	51.8	2.02	Springfield *1.....	72	31	47.8	3.90
Lordstown *1.....	78	19	45.8	1.58	The Dalles *1.....	73	30	49.8	1.00
McArthur *1.....	82	18	50.3	3.64	Tillamook R'k L.H.	.....	.....	.....	7.86
Mansfield *1.....	.....	.....	.....	2.79	Toledo.....	71	30	46.8	8.08
Marietta a *1.....	.....	.....	.....	2.91	Vale.....	68	23	44.6	1.41
Marietta b *1.....	82	26	52.0	3.02	Vernonia *1.....	66	30	45.1	7.50
Marion *1.....	78	30	47.7	3.28	West Fork *1.....	75	32	48.5	4.30
McConnellsville *1.....	79	21	50.3	2.04	Weston.....	66	29	43.8	3.06
Montpelier *1.....	78	22	45.8	3.40	Pennsylvania.	.....	.....	.....	.....
New Alexandria *1.....	74	24	48.9	3.22	Altoona.....	79	29	52.1	1.66
New Comerstown *1.....	78	19	42.2	2.77	Aqueduct *1.....	84	32	49.5	1.77
New Holland.....	78	21	49.0	3.11	Blooming Grove *1.....	80	30	45.8	1.90
North Lewisburgh *1.....	81	22	50.4	4.45	Blue Knob.....	74	19	41.9	3.35
Oberlin *1.....	75	24	45.7	3.83	Brookville *1.....	.....	.....	.....	1.74
O. S. University *1.....	78	22	50.0	2.63	Carlisle *1.....	84	24	46.7	2.77
Orangeville.....	76	16	45.0	1.55	Clarion *1.....	.....	.....	.....	2.25
Piqua *1.....	80	24	49.7	4.00	Coatesville *1.....	85	32	48.4	2.13
Pomeroy *1.....	82	21	54.5	3.75	Confuence *1.....	.....	.....	.....	4.74
Portsmouth a *1.....	.....	.....	.....	4.63	Coopersburgh *1.....	81	30	48.2	1.58
Portsmouth b *1.....	90	26	54.4	4.56	Corry *1.....	77	14	41.5	1.63
Sidney *1.....	.....	.....	.....	4.53	Davis Island Dam *1.....	.....	.....	.....	2.07
Springborough.....	.....	.....	.....	5.68	Doylstown.....	.....	.....	.....	2.00
Tiffin *1.....	75	24	47.8	3.63	Drifton *1.....	75	22	44.8	1.64
Upper Sandusky *1.....	74	26	48.4	2.67	Du Bois *1.....	.....	.....	.....	2.90
Van Wert.....	79	18	47.0	4.58	Dyberry *1.....	78	19	42.4	1.54
Warren *2.....	.....	.....	.....	1.37	East Mauch Chunk.....	83	28	47.5	1.44
Wauseon *1.....	77	20	44.0	5.17	Easton *1.....	80	26	47.8	1.79
Waverly *1.....	85	21	53.0	4.47	Edinborough *1.....	70	19	43.2	.....
Waynesville.....	.....	.....	.....	5.30	Emporium *1.....	76	22	48.0	1.64
Westerville *1.....	77	24	49.3	2.77	F'ks of Neshaminy *1.....	.....	.....	50.8	2.40
West Milton *2.....	78	24	52.1	7.25	Frederick.....	.....	.....	.....	1.95
Weymouth.....	79	14	45.0	2.89	Freeport *1.....	.....	.....	.....	1.83
Wheeler *2.....	.....	.....	.....	1.26	Girardville *1.....	77	27	46.3	1.77
Wooster *1.....	76	26	47.1	2.44	Grampian Hills *1.....	76	22	44.3	2.34
Youngstown.....	76	24	48.5	1.20	Greensborough *1.....	.....	.....	.....	2.77
Zanesville *1.....	.....	.....	.....	2.65	Hamburg.....	83	26	48.7	1.44
Oklahoma Ter.	.....	.....	.....	.....	Hollidaysburgh.....	82	20	46.8	2.84
Anadarko *1.....	86	34	60.2	1.23	Honesdale *1.....	76	33	43.7	1.58
Buffalo *1.....	91	30	51.5	0.13	Huntingdon *1.....	83	23	48.1	2.29
Burnet *1.....	94	33	59.7	3.18	Johnstown *1.....	81	33	48.5	3.55
Fort Reno.....	.....	.....	.....	1.12	Kane.....	72	17	41.2	1.71
Fort Sill.....	93	32	62.2	2.56	Kennett Square *1.....	.....	.....	.....	4.77
Gate City *1.....	98	33	54.4	0.25	Kilmer *1.....	82	35	54.5	1.75
Guthrie *1.....	96	31	60.9	0.96	Lancaster.....	84	22	47.8	1.66
Mangum *1.....	97	30	60.7	0.17	Lansdale.....	.....	.....	.....	2.26
Ponca *1.....	89	29	58.0	0.30	Lebanon *1.....	83	28	48.9	2.22
Sac & Fox Agency *1.....	93	31	62.3	1.72	Le Roy *1.....	74	19	42.7	0.96
Stillwater *1.....	94	28	56.3	3.32	Lewistown.....	80	26	47.4	2.34
Oregon.	.....	.....	.....	.....	Lock Haven *1.....	80	25	46.9	1.21
Albany a *1.....	72	32	47.0	4.66	Lock No. 4 *1.....	.....	.....	.....	2.61
Albany b *1.....	72	42	51.5	3.86	Mahoning *1.....	.....	.....	.....	1.92
Arlington *1.....	77	30	50.3	0.84	McConnellleville *1.....	84	27	47.9	2.19
Ashland a *1.....	68	36	46.5	0.89	New Castle *1.....	79	32	50.4	1.95
Ashland b.....	70	26	45.5	1.66	Oil City *1.....	.....	.....	.....	0.78
Aurora *1.....	78	39	49.0	3.55	Ottaville.....	.....	.....	.....	1.83
Bandon *1.....	57	32	46.6	6.11	Parkers Landing *1.....	.....	.....	.....	2.78
Beulah *1.....	64	18	39.4	1.32	Philadelphia a.....	82	32	52.4	2.49
Brownsville *1.....	60	38	49.8	4.82	Philadelphia b.....	79	30	51.2	2.34
Burns *1.....	70	19	37.8	0.25	Philadelphia c.....	83	25	49.2	2.22
Canyon City *1.....	70	25	45.0	5.03	Phoenixville.....	.....	.....	.....	3.68
Cascade Locks.....	70	30	51.0	8.79	Pleasant Mount.....	.....	.....	.....	2.13
Comstock *1.....	72	32	48.1	4.51	Point Pleasant.....	84	29	50.5	1.80
Corvallis a.....	63	33	48.5	4.52	Pottstown.....	82	23	47.5	1.86
Corvallis b *1.....	63	18	36.1	1.64	Quakertown *1.....	82	23	47.8	1.32
Crook.....	75	28	.....	3.01	Reading *2.....	.....	.....	.....	1.54
East Portland *1.....	69	43	51.1	5.07	Ridgeway *1.....	77	19	43.8	1.73
Eola.....	72	28	45.9	4.96	Sagehorn *1.....	74	20	41.2	1.56
Forest Grove.....	61	35	47.6	10.27	Salem Corners *1.....	.....	.....	.....	2.49
Gardiner.....	71	31	44.9	17.20	Saltburg *1.....	.....	.....	.....	1.61
Glenora.....	71	26	46.8	2.82	Seisholtzville.....	82	27	46.1	1.60
Grants Pass a *1.....	63	30	52.6	2.52	Seis Grove *1.....	75	12	42.5	.....
Grants Pass b *1.....	63	21	40.8	3.12	Smithport.....	.....	.....	.....	1.96
Happy Valley *1.....	66	28	41.2	2.82	Smiths Corners.....	74	16	44.8	4.43
Hardmann *1.....	66	29	44.2	3.83	Somerset *1.....	75	24	45.7	1.20
Heppner *1.....	62	39	47.0	4.02	South Eaton.....	78	24	45.5	2.09
Hood River, near *1.....	68	26	47.6	5.42	State College *1.....	.....	.....	.....	3.12
Hubbard.....	68	20	46.8	1.23	Stoyestown *1.....	79	30	50.0	1.78
Jacksonville.....	68	26	44.5	1.84	Swarthmore.....	81	26	49.4	3.23
John Day Junction.....	66	15	37.4	3.10	Uniontown *1.....	.....	.....	.....	0.91
Joseph *1.....	60	33	49.2	3.58	Warren *1.....	74	18	41.0	0.61
Junction City *1.....	64	30	45.2	4.94	Wellsborough *1.....	82	28	49.4	3.60
La Fayette *1.....	66	18	39.7	2.18	West Chester.....	.....	.....	.....	3.32
Lakeview.....	65	33	48.1	14.92	West Newton *1.....	82	26	48.7	1.55
Lanolois.....	72	30	47.1	4.02	Wilkes Barre *1.....	79	21	44.8	0.91
Leland *1.....	62	29	45.6	5.77	Wyaox *1.....	85	.....	.....	1.70
McMinnville a *1.....	74	30	48.1	5.69	York.....	.....	.....	.....	.....
McMinnville b *1.....	72	28	44.0	2.64	Rhode Island.	.....	.....	.....	.....
Monmouth *1.....	71	32	47.4	5.06	Bristol *1.....	70	28	45.1	1.72
Mount Angel *1.....	70	32	46.4	4.04	Kingston a.....	75	25	45.8	3.35
Newberg.....	74	27	47.4	1.69	Kingston b *1.....	74	25	44.8	3.30
New Bridge.....	61	36	48.0	8.51	Lonsdale.....	.....	.....	.....	1.38
Newport.....	62	24	40.4	0.75	Newport.....	70	30	47.6	.....
Paisley.....	72	26	47.4	2.26	Olneyville.....	76	32	49.6	.....
Pendleton.....	.....	.....	.....	.....	Pawtucket.....	76	31	49.1	1.28
Piedmont.....	.....	.....	.....	.....	Providence a.....	78	30	49.1	3.09

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
Rhode Island—Con.					Tennessee—Cont'd.				
Providence b.....	79	24	47.4	1.50	Rogersville *†.....	77	31	55.2	5.90
Providence c.....	78	28	46.6	1.41	Rugby *†.....	76	27	55.0	7.91
South Carolina.					Savannah *†.....	82	41	56.4	12.37
Allendale *†.....	84	36	66.0	0.00	Sharp *†.....	84	32	60.1	12.40
Anderson *†.....	83	42	63.0	0.47	Springdale *†.....	88	28	59.0	7.43
Batesburg *†.....	81	31	59.5	2.31	Strawberry Plains *†.....	87	43	62.4	5.94
Belmont *†.....	85	36	66.2	0.36	Sweet Water.....	78	28	56.8	10.95
Blackville *†.....	85	36	66.2	0.36	Union City *†.....	87	43	62.4	5.94
Camden *†.....	85	36	66.2	0.36	Waynesborough *†.....	87	43	62.4	5.94
Cheraw *†.....	85	36	66.2	0.36	Texas.				
Effingham *†.....	85	36	66.2	0.36	Arthur City *†.....	90	41	69.6	0.10
Florence *†.....	84	34	63.8	1.04	Austin *†.....	90	41	69.6	0.10
Green Pond *†.....	85	33	64.5	0.00	Austin b *†.....	90	41	69.6	0.10
Greenwood *†.....	80	34	58.4	0.76	Big Spring.....	91	39	67.1	1.56
Hardeeville *†.....	86	36	66.0	0.35	Brady *†.....	91	39	67.1	1.56
Kingstree *†.....	85	45	64.5	0.89	Brazoria *†.....	85	49	69.9	2.32
Kitching Mills *†.....	87	30	61.8	1.50	Brenham *†.....	90	47	73.0	0.64
Mount Carmel *†.....	87	30	61.8	1.50	Brookwood *†.....	92	38	64.7	2.44
Nichols *†.....	87	30	61.8	1.50	Burnet *†.....	86	49	68.5	1.37
Port Royal *†.....	81	45	64.5	0.43	Camp Eagle Pass.....	104	42	75.8	0.00
Saint Georges *†.....	84	34	64.6	0.15	Camp P. Colorado.....	96	30	63.4	0.50
Saint Matthews *†.....	83	37	64.8	1.30	College Station.....	94	40	71.7	2.44
Saint Stephens *†.....	83	37	64.8	1.30	Columbia *†.....	86	50	72.3	0.57
Simpsonville *†.....	82	30	55.3	6.75	Corsicana *†.....	90	42	66.7	1.27
Statesburg *†.....	83	36	60.6	1.30	Cuero *†.....	93	45	74.3	0.16
Tillers Ferry *†.....	85	32	62.1	1.54	Devine.....	95	40	73.7	0.04
Waterloo *†.....	85	32	62.1	1.54	Durham *†.....	94	52	71.7	0.80
Winnsborough *†.....	88	29	60.3	1.65	Duval *†.....	94	52	71.7	0.80
Yorkville.....	80	32	57.8	4.53	Floydada *†.....	87	32	58.0	0.05
South Dakota.					Forestburg *†.....	94	40	66.7	0.15
Aberdeen *†.....	70	23	43.7	8.05	Fort Hancock.....	96	20	58.3	0.42
Alexandria *†.....	73	17	43.8	6.69	Fort McIntosh.....	102	47	79.2	0.00
Britton *†.....	66	17	37.4	2.41	Fort Ringgold.....	106	43	79.0	0.50
Brookings *†.....	68	15	39.7	3.15	Fredericksburg *†.....	93	38	68.4	0.67
Castlewood *†.....	70	16	39.6	3.20	Gainesville *†.....	91	36	62.3	4.41
Clark *†.....	70	19	41.4	6.40	Gallinas *†.....	97	38	71.3	0.19
Cross *†.....	70	5	38.2	6.29	Graham *†.....	97	38	71.3	0.19
De Smet *†.....	72	14	40.1	4.75	Grape Vine *†.....	94	40	65.8	3.69
Elkton *†.....	62	20	37.6	5.46	Hallettsville *†.....	91	45	73.8	0.08
Faulkton *†.....	68	17	39.3	5.57	Hartley *†.....	86	26	55.6	0.25
Flandreau *†.....	73	16	42.1	2.83	Highland.....	100	41	70.0	2.25
Forestburg *†.....	73	21	43.1	5.60	Houston *†.....	86	48	70.8	3.20
Forest City *†.....	70	24	46.1	1.00	Huntsville *†.....	88	43	70.2	2.91
Fort Meade.....	68	20	41.5	5.70	Kent.....	90	43	70.2	2.91
Fort Randall.....	80	21	45.5	4.47	Llano *†.....	96	44	71.1	2.79
Fort Sully.....	70	21	43.8	4.82	Longview *†.....	91	41	68.3	3.74
Frankfort *†.....	72	17	42.4	5.53	Luling *†.....	95	49	73.5	0.00
Gary *†.....	68	10	40.4	4.76	Menardville *†.....	90	44	67.3	1.98
Kimball *†.....	77	19	44.0	6.64	Mesquite *†.....	92	40	66.3	3.06
Millbank *†.....	68	15	39.6	3.99	Mountain Spring *†.....	94	40	64.4	3.68
Mitchell *†.....	76	20	43.3	7.33	Nacogdoches *†.....	90	42	69.4	4.39
Oelrichs *†.....	78	13	41.6	7.83	New Braunfels *†.....	91	44	71.9	1.03
Onida *†.....	69	19	39.6	2.41	New Ulm *†.....	92	51	71.5	0.41
Parker *†.....	70	16	44.6	6.00	Ochiltree *†.....	84	55	74.0	2.27
Parkston *†.....	77	28	43.0	5.67	Orange *†.....	92	40	70.0	3.56
Rosebud *†.....	76	21	43.9	4.18	Red River City *†.....	95	34	65.8	0.30
Saint Lawrence *†.....	68	23	42.3	8.65	San Antonio *†.....	97	43	74.7	0.15
Salem *†.....	70	12	41.8	3.16	Sierra Blanca *†.....	85	32	60.1	0.00
Sioux Falls *†.....	74	14	43.1	4.60	Silver Falls *†.....	94	30	61.1	0.00
Spearsfish *†.....	67	13	40.6	4.61	Temple *†.....	88	43	66.9	2.60
Vermillion *†.....	85	17	45.0	2.34	Tyler *†.....	87	53	69.8	4.86
Watertown *†.....	67	12	41.3	5.14	Van Horn.....	90	42	66.8	2.75
Webster *†.....	69	13	41.5	4.67	Venus *†.....	93	42	66.8	2.75
Westworth *†.....	69	28	43.1	2.64	Waco *†.....	90	36	70.2	0.95
Wessington Spgs *†.....	81	19	43.2	5.65	Weatherford *†.....	93	43	69.2	0.52
Wolsey *†.....	70	23	40.5	7.53	Wichita Falls *†.....	94	25	63.1	0.50
Tennessee.					Utah.				
Andersonville *†.....	79	31	52.8	6.77	Beaver *†.....	78	15	45.1	1.12
Arlington *†.....	87	40	63.8	5.06	Blue Creek *†.....	74	32	49.9	0.15
Ashwood *†.....	80	32	59.0	11.13	Cisco *†.....	84	26	52.6	0.41
Austin *†.....	84	28	59.2	7.32	Corinne *†.....	76	30	48.5	0.45
Bethel Springs *†.....	86	30	59.6	9.79	Deseret *†.....	77	22	47.2	0.71
Bolivar *†.....	80	44	63.9	1.62	Fillmore *†.....	77	24	49.9	2.11
Brownsville *†.....	87	41	64.9	5.53	Fort Du Chesne.....	75	18	46.4	1.24
Carthage *†.....	87	41	64.9	5.53	Green River *†.....	85	21	56.7	0.10
Charleston *†.....	87	41	64.9	5.53	Grouse Creek *†.....	85	21	56.7	0.10
Clarksville *†.....	81	30	59.0	9.55	Kelton *†.....	76	28	47.6	0.05
Columbia *†.....	81	30	59.0	9.55	Lake Park.....	71	27	46.4	1.70
Covington a *†.....	81	38	60.7	8.82	Levan *†.....	73	14	40.8	0.15
Covington b *†.....	90	36	66.7	3.40	Loa *†.....	73	14	40.8	0.15
Dunlap *†.....	86	25	59.8	10.45	Logan.....	77	16	42.8	0.99
Dyersburg *†.....	81	34	59.8	11.44	Losee *†.....	75	22	44.4	0.10
Fayetteville *†.....	77	37	58.7	8.62	Moab *†.....	87	25	54.3	0.60
Franklin *†.....	82	34	59.2	9.32	Mount Carmel *†.....	76	30	46.5	1.15
Greeneville *†.....	80	28	55.4	4.94	Nephi *†.....	74	30	44.1	1.28
Hohenwald *†.....	86	26	60.0	10.34	Ogden a *†.....	80	30	45.1	1.02
Jacksboro *†.....	79	28	58.8	6.54	Ogden b *†.....	80	30	45.1	1.02
Jackson *†.....	82	36	60.0	7.65	Park City *†.....	80	30	45.1	1.02
Johnson City *†.....	80	24	55.7	5.81	Parowan *†.....	75	13	46.6	2.03
Johnsonville *†.....	80	24	55.7	5.81	Promontory *†.....	72	28	45.8	0.40
Kingston *†.....	82	30	61.2	7.68	Richfield *†.....	76	15	46.4	1.09
Kingston Springs *†.....	82	30	61.2	7.68	Saint George *†.....	86	29	59.1	0.15
Loudon *†.....	82	30	61.2	7.68	Snowville *†.....	73	11	45.7	0.83
Lynnville *†.....	84	32	60.0	13.75	Soldiers Summit *†.....	73	11	45.7	0.83
McKenzie *†.....	87	39	62.0	9.95	Stockton *†.....	73	11	45.7	0.83
McMinnville *†.....	86	34	60.4	10.05	Terrace *†.....	74	33	50.6	0.40
Milan *†.....	84	36	63.2	5.90	Thistle *†.....	83	20	47.4	1.13
Missionary Ridge *†.....	80	40	58.4	5.75	Vermont.				
Newport *†.....	80	30	55.5	5.75	Brattleborough a.....	74	21	45.6	0.45
Nunnally *†.....	81	34	59.8	9.30	Burlington *†.....	68	23	44.4	1.02
Parkville *†.....	80	29	59.3	6.68	Chelsea *†.....	56	12	37.2	1.25
Riddleton *†.....	88	29	58.7	7.84	Cornwall.....	56	12	37.2	1.25
Rockwood *†.....	88	29	58.7	7.84					

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
Vermont—Cont'd.					W. Virginia—Con.				
Enosburgh Falls †	68	16	40.8	2.10	Wheeling b †	81	28	54.0	2.10
Hartland †	69	14	40.9	0.69	White Sul. Springs †				5.70
Jacksonville	70	14	41.0	0.87	Wisconsin.				
Saxtons River	70	15	42.2	0.47	Amherst	77	18	40.3	1.97
Stratford * †	60	15	41.0	1.05	Appleton †	67	20	41.1	1.67
Vernon * †	74	24	46.5	0.58	Baraboo †	74	20	41.7	3.13
Wells	68	14		0.73	Barron †	63	13	39.9	2.29
Virginia.					Bayfield	58	6	35.1	2.90
Abingdon †				4.58	Beaver Dam.	70	20	40.4	3.02
Ashland.	87	27	54.1	6.04	Beloit	73	24	44.9	4.66
Avon †	86	28	53.4	3.53	Berlin	80	22	44.1	2.80
Bedford City †	82	28	53.2	3.87	Black River Falls †	72	16	41.8	2.59
Big Stone Gap †	81	24	52.8	9.07	Butternut †	65	10	39.0	0.30
Birdsneat * †	81	26	54.0	7.00	Cadiz †			41.4	3.46
Blacksburg †	74	24	49.7	3.00	Centralia.	72	11	39.1	1.89
Cape Charles †	78	35	54.5	6.82	Chippewa Falls †				1.71
Charlottesville	84	28	54.8	3.43	Columbus	76	21	44.1	3.50
Christiansburg †				3.61	Crandon †	68	10	36.9	2.19
Clarksville †				2.75	Delavan (near) †			39.9	4.02
Dale Enterprise †	79	22	51.7	2.94	De Pere	73	22	42.8	1.39
Danville †				2.00	Dodgeville †	74	26	42.4	3.34
Lexington †	83	22	52.1	4.43	Eau Claire a	68	17	42.0	2.40
Marion †	77	22	53.2	5.10	Embarrass * †	71	23	41.1	2.50
Mossing Ford * †	80		53.8	3.80	Florence †	65	8	35.3	2.20
Nottaway C. H.	86	24	53.5	4.36	Fond du Lac †	75	22	42.4	1.79
Petersburg †	91	29	55.2	5.51	Hammond †	64	15	41.8	0.92
Richmond †	86	30	57.7	7.07	Harvey †	72	23	43.0	3.23
Salem †	79	28	53.4	4.04	Hayward †	64	11	36.7	3.10
Spottsville †	84	26	54.2	5.99	Hillsborough	75	18	41.0	3.96
Standardsville †	81	30	52.8	2.93	Hudson	73	17	45.0	0.60
Staunton †	83	25	50.8	3.56	Janessville.	73	22	43.8	2.60
Woodstock †				2.77	Koenigsack * †	73	18	43.0	2.60
Washington.					Lancaster †	73	20	42.9	2.74
Aberdeen †	71	29	46.0	10.84	Lincoln †			40.7	1.06
Centerville †	68	25	47.2	1.00	Madison	72	22	43.1	3.94
Chelalis †	75	29	46.8	4.49	Manitowoc †	65	19	41.6	1.57
Chelan †	64	30	48.4	1.32	Meadow Valley †	74	17	41.8	1.89
Colfax †	68	23	44.5	2.74	Medford a †				2.90
Doe Bay †	65	33	45.9	1.69	Medford b †	69	13	39.0	2.03
East Sound †	73	32	46.6	1.73	Menomonie.	70	15	41.3	2.13
Ellensburg †	70	21	44.2	0.62	Mineral Point	74	20	45.5	1.54
Fort Simcoe * †	64	36	49.8	0.84	Neillsville †	70	16	40.7	2.78
Fort Spokane	71	26	46.0	1.68	New Holstein †	70	24	40.7	1.50
Fort Townsend	71	28	45.8	2.42	Oconomowoc †	70	22	43.9	3.23
Lapush †	59	20	36.1	7.71	Oconto	74	18	40.4	1.75
Madrone †	73	31	48.2	4.22	Oshkosh Mills * †	64	11	40.2	1.32
Moxee Valley †	69	24	51.0	0.39	Oskosh †	74	20	42.3	2.20
Pomeroy †	62	32	46.0	1.31	Pepin	60	17	40.6	1.58
Ritzville †	89	27	47.8	2.69	Peshigo	68	17	39.0	2.05
Rosalia †	66	25	40.7	2.07	Phillips †	56	6	33.5	2.41
Seattle †	84	32	51.4	3.82	Plover †	75	16	39.7	2.12
Selhome †	77	30	47.0	1.87	Portage †				2.96
Tacoma †	74	31	48.1	3.72	Prairie du Chien.	75	17	45.2	4.03
Union City †	70	32	47.6	4.96	Richland Centre †	78	18	45.3	4.74
Vashon †	79	31	48.5	0.57	Shawano	76	17	39.8	1.97
Waterville †	65	21	39.3	1.74	Shell Lake.	67	13	38.4	1.73
Wilbur †	72	24	42.0	1.83	Sparta b †	75	20	44.5	3.34
West Virginia.					Via Junction †	77	15	41.2	2.69
Beverly †	81	20	51.0	4.57	Viroqua	72	19	41.6	5.29
Buckhannon a †				5.76	Watertown	70	23	43.0	2.75
Buckhannon b †	80	20	49.0		Waukesha †				2.23
Charleston a †				5.21	Westfield †	75	19	41.8	2.93
Charleston b †	85	26	56.1	5.18	Weston * †			40.3	2.42
Elizabeth †	85	20	44.0	4.10	Whitehall †	70	15	44.0	2.66
Elkhorn †	80	21	52.6		Wittenberg †	75	15	38.9	2.18
Ella †	87	25	48.5	2.54	Wyoming.				
Fairmont †				3.56	Atlantic City * †	54	16	34.4	.....
Glenville †	80	21	51.3	4.78	Bitter Creek †	60	12	34.1	2.30
Harpers Ferry †				2.65	Camp Fossil Butte.	64	15	30.9	1.65
Harrisville †	87	17	53.2	3.99	Casper †	82	24	45.4	2.14
Hinton †				5.77	Evanson	61	11	34.9	1.25
Kingwood †	80	20	48.8	5.35	Fort Laramie †	74	23	44.4	2.21
Martinsburg †	81	31	50.9	3.14	Fort McKinney	70	9	36.8	3.23
Moorefield †	80	30	48.4	2.44	Fort Washakie	67	11	39.0	2.33
Morgantown †				3.59	Fort Yellowstone.	57	3	32.2	0.92
Morgantown b * †	87	24	47.7	3.02	La Barge †	68	12	40.4	0.62
Nuttallburgh	85	25	53.8	0.53	Laramie b	66	11	35.6	0.27
Parkersburg †	82	25	51.6	3.97	Lusk †	76	11	39.4	2.78
Philippi †				5.22	Sundance	68	12	38.1	4.58
Piedmont	82	23	48.1	3.37	Wheland †	78	21	44.0	2.35
Pleasant Hill †	77	20	44.8	5.39	Mexico.				
Point Pleasant †	85	25	53.8	4.28	La Logia	91	46	69.9	0.00
Romney †	79	31	49.4	3.84	Pueblo de Aldamas	95	52	71.2	T.00
Rousesburg †				4.84	Leon	86	52	67.6	0.00
Spencer †	87	23	54.7	4.12	New Brunswick.				
Tannery * †	82	20	49.2		Saint John.	57	24	40.2	2.26
Weston †				5.88	West Indies.				
Wheeling a †				3.30	Grand Turk Island.				0.32
					Hamilton, Ber †	73	53	63.9	2.73

Reports received too late, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
New York—Cont'd.	62	16	15.8	0.80	Oregon.	73	33	48.0	3.25
Lyon Mountain	74	26	46.3	0.72	Fife	59	15	37.6	1.10
Rondout	74	16	40.4	1.08	Texas.	90	43	70.9	2.99
Wedgwood	80	26	56.8	3.43	Dallas	81	20	50.2	4.56
North Carolina.	64	16	38.3	3.96	West Virginia.				
Lexington					Grafton				
North Dakota.									
Kelso									

Received too late for publication in March, 1892.

Arizona.				0.80	New York—Cont'd.				
Woodruff					Dunkirk	58	10	28.1	2.96
Illinois.					Elmira	60	6	28.2	0.98
Collinsville	76	14	40.2	1.95	Lockport	55	9	28.0	0.98
Warsaw				1.06	Potsdam	43	7	20.1	3.43
Iowa.					Rondout	55	12	30.4	3.58
Sac City	66	-4	28.6	1.46	Victor	51	6	27.6	1.72
Kansas.					Wedgwood	58	4	24.1	3.81
Ulysses	76	2	38.0	1.30	Oregon.				
Kentucky.					Fife	68	6	38.4	1.07
Richmond	71	12	38.9	4.01	South Dakota.				
Michigan.					Aberdeen	58	-13	29.1	0.46
Berrien Sp'gs	62	11	33.4	2.48	Texas.				
New York.					Durham				0.41
Angelica	52	-4	23.7	3.55	Forestburgh	72	20	43.0	3.75
Arkwright	55	8	25.7		Panther	85	21	54.6	3.22

*Extremes of temperature from observed readings of dry thermometer.

†Weather Bureau instruments.

A numeral following the name of a station indicates the hours of observation from which the mean temperature was obtained, thus:

1 Mean of 7 a. m. + 2 p. m. + 9 p. m. + 9 p. m. + 4.

2 Mean of 8 a. m. + 8 p. m. + 2.

3 Mean of 7 a. m. + 7 p. m. + 2.

4 Mean of 6 a. m. + 6 p. m. + 2.

5 Mean of 7 a. m. + 2 p. m. + 2.

6 Mean from readings at various hours reduced to true daily mean by special tables.

The absence of a numeral indicates that the mean temperature has been obtained from daily readings of the maximum and minimum thermometers.

An italic letter following the name of a station, as "Livingston a," "Livingston b," indicates that two or more observers, as the case may be, are reporting from the same station. A small Roman letter following the name of station indicates the number of days missing from the record, for instance, "a" denotes 14 days missing.

A small Roman letter in figure columns indicates the number of days missing from the record; example, "4" four days missing, etc.

NOTE.—The following changes have been made in names of stations: Seven Palms, Cal., changed to Palm Springs; Lake Village, N. H., changed to Lakeport.

Corrections: March, 1892, Alabama, Walker Springs, add 58.4; South Dakota, Parker, make precipitation 1.17, instead of 0.72.

Data from Canadian stations for the month of April, 1892.

Station.	Pressure.			Temperature.		Precipitation.		Prevailing direction of wind.
	Mean not reduced.	Mean reduced.	Departure from normal.	Mean.	Departure from normal.	Total.	Departure from normal.	
Saint John's, N. F.	29.68	29.83	-.05	38.1	+1.9	3.81	-.06	S.
Sydney, N. S.	29.79	29.85	-.06	38.0	+3.5	2.06	-1.74	SW.
Sable Island	29.89	29.85	+.04	40.4	-.04	2.40	-1.29	SW.
Halifax, N. S.	29.76	29.91	-.02	41.5	+4.0	2.65	-0.66	NW.
Grand Manan, N. B.	29.84	29.89	-.05	41.0	-.10	2.24	-1.16	W.
Yarmouth, N. S.	29.86	29.94	-.08	40.5	+1.5	2.57	-0.37	W.
Saint Andrews, N. B.	29.83	29.88	-.05	40.4	-.04	1.27	-1.29	NW.
Charlottetown, P. E. I.	29.81	29.85	-.04	38.8	-.08	1.42	-1.50	SW.
Chatham, N. B.	29.82	29.84	-.02	38.0	+4.5	1.71	-1.39	SW.
Father Point, Que.	29.82	29.85	-.03	34.8	+2.3	0.63	-1.39	W.
Quebec, Que.	29.60	29.94	-.01	37.0	+2.5	1.33	-1.00	NW.
Montreal, Que.	29.77	29.98	-.02	39.8	+1.3	1.58	-0.86	NW.
Rockliffe, Ont.	29.48	29.95	-.03	35.6	+1.6	1.60	+0.36	NW.
Kingston, Ont.	29.70	30.02	-.05	39.4	+0.9	0.80	-1.15	SW.
Toronto, Ont.	29.68	30.07	-.05	40.2	+0.2	1.25	-0.63	NW.
White River, Ont.	28.70	30.09	-.09	29.2	-.09	0.00	.....	N.
Port Stanley, Ont.	29.43	30.08	-.05	39.7	-.07	2.05	-0.08	W.
Saugeen, Ont.	29.34	30.07	-.07	38.1	+1.1	0.80	-1.03	W.
Parry Sound, Ont.	29.33	30.04	-.06	36.4	+1.9	1.84	+0.12	W.
Port Arthur, Ont.	29.34	30.06	-.04	31.4	-1.1	2.90	+1.53	N.
Winnipeg, Man.	29.24	30.10	-.07	31.6	-1.9	2.55	+1.20	NE.
Minneapolis, Man.	28.23	30.07	-.09	31.2	-2.3	0.71	-0.41	SE.
Qu'Appelle, Assiniboia	27.76	30.07	-.11	32.2	-3.3	1.94	+0.88	SE.
Medicine Hat, Assiniboia	27.60	29.93	-.01	39.1	-4.9	1.45	+0.97	E.
Swift Current, Assiniboia	27.38	30.02	-.02	35.0	-3.5	3.38	+2.20	SE.
Calgary, Alberta	26.34	29.95	-.03	34.1	-3.9	0.60	-0.03	W.
Prince Albert, Saskatch'n	29.94	29.97	-.03	46.0	-1.7	2.53	-0.19	SW.
Esquimalt, B. C.								
Stony Mountain, Man.								
Port Moody, B. C.								
St. Albans, Man.	28.82	29.99	+.06	40.2	0.0	1.65	+0.36	.....
Edmonton, Alberta	27.61	29.99	-.08	35.7	-.08	0.98	+0.41	SE.
Battleford, Saskatchewan	28.25	30.03	-.02	33.0	-.02	0.20	.....	SE.
Grindstone, Gulf St. L.	29.76	29.79	-.03	34.0	-.03	1.85	.....	NW.
Hamilton, Bermuda	30.00	30.16	-.06	63.6	-.06	2.35	.....	SW.

Table of miscellaneous meteorological data for April, 1892—Weather Bureau observations.

Districts and stations.	Elevation above sea-level, feet.	Length of record, years.	Pressure, in inches.		Temperature of the air, in degrees Fahrenheit.					Humidity and precipitation.					Wind.			Cloudless days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Mean temperature data since opening of station.								
			Mean pressure, 8 a. m. and 8 p. m. + 2.	Mean reduced.	Departure from normal.	Mean max. and min. + 2.	Departure from normal.	Maximum.	Date.	Mean minimum.	Date.	Mean maximum.	Greatest daily range.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Precipitation, in inches.	Departure from normal.					Days with or more.	Total movement, miles.	Prevailing direction.	Maximum velocity.	Date.	Year.	Lowest for month.	Year.	
New England.																														
Eastport	53	20	29.84	29.90	+ .01	45.2	+ 1.5	66	3	50	24	25	35	24	27	62	1.87	- 1.7	W.	30	13	6	8	13	9	5.7	42.0	1892	33.8	1874
Portland	99	21	29.85	29.96	+ .04	43.6	+ 2.4	72	3	52	24	25	35	34	29	60	1.04	- 2.0	W.	30	14	7	10	14	7	5.7	48.8	1878	30.4	1874
Manchester	247	6	29.73	30.00	.....	45.8	.....	73	3	57	23	24	34	39	25	47	0.69	.....	W.	30	15	6	15	7	9	4.0	48.0	1889	40.4	1888
Northfield	872	6	29.05	30.01	.....	39.4	.....	71	3	50	14	25	39	42	39	66	0.44	.....	W.	30	16	6	11	11	6	5.0	48.4	1889	35.0	1888
Boston	125	22	29.88	30.02	+ .09	48.4	+ 3.3	77	3	57	27	25	39	32	30	54	0.93	- 2.7	W.	30	14	10	10	10	6	4.0	48.4	1892	37.0	1874
Nantucket	14	6	30.03	30.04	.....	46.2	.....	62	24	58	33	33	41	19	35	69	2.70	.....	W.	30	15	12	11	11	6	4.9	46.2	1892	41.8	1888
Woods Hole	22	15	.....	.....	.....	43.7	- 0.6	60	24	58	30	13	37	20	.....	.....	2.61	- 1.6	W.	30	11	14	10	10	6	5.1	48.7	1875	38.2	1874
Vineyard Haven	.....	6	.....	.....	.....	48.0	.....	70	6	50	31	25	38	33	.....	.....	2.57	.....	W.	30	14	9	10	10	6	5.0	45.2	1886	44.5	1888
Block Island	27	12	30.02	30.05	+ .10	44.2	+ 0.4	65	6	50	31	25	38	31	37	79	2.79	- 0.3	W.	30	15	10	12	12	8	5.0	45.2	1886	42.1	1888
Narragansett Pier	22	11	.....	.....	.....	46.4	+ 2.2	72	6	58	19	1	35	34	.....	.....	2.88	- 0.4	W.	30	15	10	12	12	8	4.9	52.4	1878	40.0	1874
New Haven	107	20	29.92	30.04	+ .07	47.0	+ 1.2	77	3	56	27	1	38	28	37	71	1.31	- 2.4	W.	30	16	11	12	7	4.9	52.4	1878	39.0	1874	
New London	47	22	29.98	30.03	+ .06	46.0	- 0.1	75	3	54	28	1	38	28	34	67	5.21	- 0.4	W.	30	16	6	15	7	5.5	50.2	1878	39.9	1874	
Mid. Atlantic States.																														
Albany	85	19	29.95	30.04	+ .08	46.1	- 0.6	74	3	55	24	25	37	30	35	68	0.56	- 2.1	W.	30	16	28	8	18	4	4.6	51.5	1878	36.6	1874
New York, N. Y.	185	22	29.86	30.00	+ .08	49.9	+ 1.2	79	4	58	31	10	42	24	30	63	2.36	- 1.0	W.	30	10	9	13	8	5	5.6	53.6	1871	41.3	1874
Harrisburg	377	4	29.69	30.10	.....	48.5	.....	80	4	57	30	10	40	26	34	59	2.15	.....	W.	30	10	9	10	12	5	5.9	52.8	1891	48.5	1892
Philadelphia	117	22	29.97	30.09	+ .10	50.9	- 0.0	80	4	59	32	10	43	25	30	61	2.03	- 0.8	W.	30	10	9	13	5	5	5.5	51.1	1871	42.0	1874
Atlantic City	53	19	30.04	30.09	+ .12	46.5	- 0.6	76	6	53	28	12	40	30	38	76	3.05	- 0.3	W.	30	15	10	11	9	5	5.3	52.3	1878	42.4	1875
New Brunswick	.....	.....	.....	.....	.....	48.8	.....	81	4	59	27	12	39	30	.....	.....	2.58	.....	W.	30	16	10	11	9	5	5.5	51.1	1871	40.9	1874
Baltimore	179	22	29.90	30.10	+ .10	51.6	- 1.5	83	4	59	32	10	44	28	39	65	3.15	- 0.1	W.	30	15	11	11	11	5	5.8	58.8	1871	47.0	1874
Washington, D. C.	112	22	29.99	30.11	+ .12	51.4	- 1.4	81	3	60	31	12	43	31	39	65	4.52	- 1.4	W.	30	15	12	7	11	5	5.4	58.3	1878	47.0	1874
Cape Henry	.....	.....	.....	.....	.....	54.0	+ 0.8	83	5	63	35	10	46	28	.....	.....	7.61	- 3.1	W.	30	13	13	9	8	5	5.8	58.8	1880	51.1	1875
Lynchburg	685	21	29.39	30.14	+ .14	53.8	+ 2.0	82	5	63	31	10	45	31	39	62	4.13	- 0.8	W.	30	13	9	11	11	5	5.8	61.5	1878	50.6	1874
Norfolk	43	22	30.08	30.12	+ .12	52.2	+ 0.1	83	5	64	33	11	48	30	47	77	6.82	- 2.7	W.	30	14	13	7	10	4	4.7	62.5	1871	52.3	1874
S. Atlantic States.																														
Charlottesville	773	14	29.30	30.12	+ .11	56.7	+ 3.1	78	3	66	31	10	48	27	46	73	3.30	- 0.2	W.	30	14	11	7	12	5	5.3	63.2	1888	55.7	1881
Hatteras	11	12	30.14	30.15	+ .16	56.6	+ 0.8	81	2	62	38	10	51	20	50	83	4.24	- 0.9	W.	30	14	7	13	10	5	5.8	63.4	1891	52.8	1881
Kitty Hawk	9	18	30.11	30.12	.....	55.6	+ 0.8	81	5	62	36	10	49	26	50	84	1.94	- 3.1	W.	30	14	8	10	10	5	5.0	60.8	1890	50.0	1875
Raleigh	388	6	29.72	30.14	.....	57.2	.....	82	5	67	30	10	47	30	46	69	5.57	.....	W.	30	14	29	9	10	6	4.8	63.7	.....	50.2	1875
Southport	34	17	30.12	30.15	.....	57.8	+ 2.3	72	23	64	32	10	52	25	54	86	0.80	- 2.1	W.	30	14	10	12	11	6	4.8	63.7	.....	56.4	1881
Wilmington	75	22	30.07	30.16	+ .15	60.2	- 1.1	80	5	68	35	10	52	27	50	74	1.13	- 2.0	W.	30	14	10	12	11	6	2.6	65.6	1871	56.4	1881
Charleston	52	22	30.10	30.16	+ .13	63.9	- 0.3	80	5	71	42	10	57	21	54	76	0.51	- 3.6	W.	30	14	7	5	18	5	5.6	67.5	1871	60.4	1881
Columbia	.....	5	.....	.....	.....	62.6	.....	84	5	74	43	10	52	29	.....	.....	1.43	.....	W.	30	15	17	5	8	6	6.1	68.1	1888	61.4	1891
Augusta	209	21	29.94	30.17	+ .14	62.6	- 1.7	85	18	73	35	16	52	34	49	68	1.34	- 2.4	W.	30	14	17	8	10	6	4.4	67.4	1878	60.6	1875
Savannah	97	22	30.07	30.17	+ .12	65.5	- 0.6	85	18	74	42	10	57	25	54	76	0.16	- 3.7	W.	30	14	17	8	13	9	4.4	67.4	1878	62.5	1875
Jacksonville	43	21	30.11	30.16	+ .12	69.4	+ 0.6	88	19	79	43	16	60	29	56	70	0.11	- 3.0	W.	30	14	17	8	11	5	5.2	71.2	1878	66.5	1875
Florida Peninsula.																														
Jupiter	28	5	30.12	30.15	.....	72.8	.....	84	15	79	55	16	66	21	66	80	0.53	.....	W.	30	14	27	20	10	3	0.7	73.2	1890	70.6	1880
Key West	22	22	30.11	30.13	+ .09	76.0	- 0.0	83	20	80	64	16	72	14	65	71	2.76	- 0.6	W.	30	14	27	19	8	3	3.5	79.2	1883	73.2	1891
Mico	.....	.....	.....	.....	.....	73.3	.....	92	7	84	48	11	63	36	.....	.....	2.76	.....	W.	30	14	27	19	8	3	3.5	79.2	1883	73.2	1891
Tampa	36	30	30.11	30.15	.....	71.8	.....	88	18	82	46	11	63	29	60	74	0.31	.....	W.	30	14	22	7	12	2	1.4	77.2	.....	67.3	1891
Titusville	44	5	30.12	30.16	.....	70.8	.....	86	14	78	48	11	63	29	63	81	1.08	.....	W.	30	14	3	21	9	2	2.7	71.6	1888	67.3	1891
Western Gulf States.																														
Albany	1,131	14	28.94	30.14	+ .10	59.0	- 2.0	82	18	69	32	10	49	29	48	71	4.75	+ 0.9	W.	30	14	14	9	7	4	5.6	64.3	1882	58.1	1884
Pensacola	56	13	30.05	30.11	+ .07	64.6	- 0.8	80	30	73	46	10	62	20	60	82	0.42	- 3.4	W.	30	14	15	7	10	5	5.0	70.4	1882	64.4	1881
Auburn	.....	.....	.....	.....	.....	64.6	.....	82	30	73	46	10	62	20	60	82	0.42	- 3.4	W.	30	14	15	7	10	5	5.0	70.4	1882	64.4	1881
Mobile	35	22	30.05	30.11	+ .06	66.2	- 1.4	82	30	73	46	10	62	20	60	82	0.42	- 3.4	W.	30	14	15	7	10	5	5.0	70.4	1882	64.4	1881
Montgomery	217	20	29.88	30.11	+ .07	66.9	+ 1.0	87	18	77	42	16	57	31	59	83	3.10	- 2.1	W.	30	14	15	7	10	5	5.0	70.4	1882	64.4	1881
Mer																														

Table of miscellaneous meteorological data for April, 1892—Weather Bureau observations—Continued.

Districts and stations.	Elevation above level, feet.	Length of record, years.	Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.					Humidity and precipitation.					Wind.				Mean temperature data since opening of station.											
			Mean pressure, 8 a. m. and 8 p. m. + z.	Mean reduced.	Departure from normal.	Mean max. and min. + z.	Departure from normal.	Maximum.	Date.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean temperature of the day-point.	Mean relative humidity, per cent.	Precipitation, in inches.	Departure from normal.	Days with or more.	Total movement, miles.	Prevailing direction.	Maximum velocity.		Date.	Cloudless days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Highest for month.	Year.	Lowest for month.	Year.
																					Miles per hour.	Direction.									
W. Northwest—Con.																															
Fort Buford.....	1,899	14	27.96	30.02	+ .05	38.8	- 4.1	66	22	48	10	8	29	36	74	2.65	+ 1.4	11	8,605	ne.	40	nw.	27	4	11	15	6.8	48.7	1889	35.5	1880
Upper Miss. Valley.																															
Minneapolis.....	758	29	29.19	30.02	.....	43.4	.....	66	22	53	17	9	34	33	.....	1.07	.....	7	.....	e.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Red Wing.....	550	22	29.10	30.04	+ .07	42.2	- 3.7	65	1	51	17	9	34	31	.....	0.97	- 1.4	7	.....	ne.	54	w.	27	1	11	13	6.0	.....	.....	.....	.....
Saint Paul.....	720	20	29.25	30.04	+ .10	44.0	- 3.1	72	27	53	20	9	35	38	.....	4.70	+ 2.7	11	.....	nw.	48	ne.	28	4	13	13	6.7	50.9	1878	36.9	1874
La Crosse.....	613	21	29.39	30.05	+ .07	47.2	- 3.2	74	27	55	24	9	39	39	.....	5.41	+ 2.7	14	11,209	e.	60	sw.	1	5	16	9	6.0	53.9	1878	40.2	1874
Davenport.....	869	14	29.05	30.00	.....	47.0	- 3.4	72	30	55	25	9	39	35	.....	3.37	+ 0.8	11	.....	nw.	64	sw.	1	5	13	13	6.3	54.7	1878	41.2	1874
Des Moines.....	651	19	29.32	30.03	+ .06	45.7	- 3.7	73	27	54	23	9	37	36	.....	4.37	+ 1.5	10	.....	sw.	32	sw.	1	5	10	15	6.7	53.6	1878	41.3	1874
Dubuque.....	613	21	29.34	30.01	+ .05	49.2	- 2.9	75	27	58	26	10	41	30	.....	6.15	+ 3.3	14	.....	sw.	40	sw.	4	6	13	11	5.9	57.5	1878	44.0	1874
Keokuk.....	359	31	29.67	30.06	+ .00	48.2	- 3.6	72	27	55	24	9	42	37	.....	5.28	+ 1.4	12	.....	sw.	48	sw.	1	9	12	12	6.0	56.1	1886	47.9	1881
Cairo.....	544	13	29.34	30.04	+ .05	49.8	- 3.3	79	27	58	26	9	42	37	.....	7.60	+ 4.3	13	.....	sw.	42	sw.	4	7	14	9	5.9	61.3	1878	47.6	1874
Springfield, Ill.....	871	22	29.41	30.03	+ .06	47.4	- 3.1	85	27	61	30	9	47	35	.....	5.47	+ 2.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Saint Louis.																															
Missouri Valley.																															
Columbia.....	963	4	28.95	29.98	.....	52.5	.....	80	17	60	30	9	44	31	.....	4.32	.....	16	6,822	sw.	44	sw.	1	13	7	10	5.0	.....	.....	.....	.....
Kansas City.....	1,356	7	28.50	30.00	+ .02	54.8	- 2.3	85	17	64	29	9	46	35	.....	4.56	+ 0.4	11	9,139	sw.	44	sw.	13	7	13	10	5.6	59.0	1888	54.8	1892
Springfield, Mo.....	857	31	29.06	29.99	+ .03	51.8	- 2.9	78	8	60	29	9	44	33	.....	4.90	+ 1.5	13	8,579	e.	66	sw.	1	2	14	14	7.0	58.5	1878	48.1	1873
Leavenworth.....	.....	5	.....	.....	.....	52.5	.....	83	17	63	23	9	43	39	.....	2.17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Topeka.....	1,113	22	28.79	29.99	+ .01	48.1	- 3.3	81	30	59	26	9	48	35	.....	4.82	+ 1.7	18	7,700	n.	42	sw.	1	8	8	14	6.4	55.2	1890	44.4	1881
Omaha.....	.....	7	27.21	29.98	.....	42.2	- 4.5	70	29	51	18	8	34	39	.....	3.49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Crete.....	2,613	7	27.21	29.98	.....	42.2	- 4.5	70	29	51	18	8	34	39	.....	3.49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Valentine.....	1,158	21	28.71	29.97	.....	46.5	.....	88	30	56	24	9	47	34	.....	7.03	+ 4.8	20	10,127	n.	56	nw.	1	3	10	11	6.8	57.0	1890	52.5	1892
Sioux City.....	1,470	21	28.38	29.97	.....	43.2	.....	69	23	52	22	8	35	34	.....	4.70	.....	12	9,987	nw.	60	sw.	1	8	9	13	6.6	.....	.....	.....	.....
Pierre.....	1,310	11	28.55	29.98	.....	43.2	- 3.6	72	29	52	19	9	33	44	.....	3.86	.....	14	9,309	e.	46	ne.	3	5	11	14	7.4	51.8	1889	44.2	1892
Huron.....	1,232	20	28.65	29.99	+ .02	45.5	- 2.1	83	30	55	20	9	36	37	.....	5.90	+ 3.4	14	12,268	sw.	62	sw.	27	8	9	13	6.5	59.6	1889	41.8	1884
Yankton.....	.....	.....	.....	.....	.....	45.5	- 2.1	83	30	55	20	9	36	37	.....	5.90	+ 3.4	14	12,268	sw.	62	sw.	27	8	9	13	6.5	59.6	1889	41.8	1884
Northern Slope.																															
Fort Assinaboine.....	2,690	12	27.11	29.99	+ .02	38.0	- 6.4	68	22	48	15	8	28	40	.....	1.04	+ 0.2	13	8,375	sw.	52	sw.	5	3	17	10	6.7	50.4	1889	38.0	1892
Miles City.....	2,374	.....	.....	.....	.....	42.9	.....	76	15	54	16	8	32	43	.....	1.39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Helena.....	4,118	13	25.74	30.02	+ .02	40.0	- 4.9	66	14	49	14	8	31	32	.....	0.72	- 0.4	15	5,993	sw.	36	sw.	25	4	12	14	6.8	49.3	1889	36.8	1880
Rapid City.....	3,280	7	26.55	29.98	+ .03	40.4	- 5.5	68	15	50	19	8	31	36	.....	4.04	+ 2.2	17	6,674	nw.	48	nw.	1	5	13	12	6.7	49.8	1889	40.4	1892
Cheyenne.....	6,103	22	23.91	30.01	.....	39.9	- 3.2	71	29	50	18	8	30	36	.....	1.21	- 0.2	11	8,260	n.	58	nw.	1	3	20	7	6.1	47.8	1888	33.9	1873
Kearney.....	.....	.....	.....	.....	.....	46.6	.....	90	30	56	25	9	32	45	.....	2.51	.....	12	11,904	nw.	60	nw.	1	6	12	12	6.3	.....	.....	.....	.....
Lander.....	5,377	.....	.....	.....	.....	37.4	.....	86	29	50	9	13	25	45	.....	4.16	.....	11	3,353	w.	69	nw.	17	11	13	8	5.1	.....	.....	.....	.....
North Platte.....	2,841	18	26.99	29.98	.....	45.8	- 3.6	86	30	56	24	9	35	43	.....	4.30	+ 2.1	14	9,248	nw.	50	nw.	26	6	14	10	6.2	52.1	1888	42.0	1875
Middle Slope.																															
Denver.....	5,287	31	24.64	29.98	.....	45.8	- 2.3	80	30	58	16	21	33	40	.....	1.75	- 0.3	9	6,530	nw.	36	ne.	4	11	16	3	4.5	53.2	1888	39.7	1873
Pueblo.....	4,734	4	25.14	29.92	.....	49.0	.....	84	30	64	24	9	34	49	.....	0.93	.....	6	7,017	w.	48	nw.	1	9	17	4	5.0	53.8	1889	49.0	1892
Concordia.....	1,410	7	26.46	29.97	+ .01	51.3	- 1.8	80	30	62	24	9	41	44	.....	1.56	- 1.7	13	8,536	sw.	60	sw.	1	10	9	11	5.3	56.8	1891	51.0	1886
Dodge City.....	2,523	18	27.30	29.94	.....	51.8	- 2.3	82	26	64	26	22	39	43	.....	0.40	- 1.3	7	11,720	nw.	58	nw.	1	11	5	4	4.6	56.9	1888	48.5	1875
Wichita.....	1,366	4	28.50	29.96	.....	54.6	.....	85	16	65	29	9	44	38	.....	2.05	.....	7	9,330	sw.	50	sw.	1	8	15	7	5.3	58.5	1891	54.6	1892
Oklahoma City.....	1,239	.....	.....	.....	.....	58.2	+ 1.0	.....	.....	.....	.....	.....	.....	.....	.....	0.88	- 1.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Southern Slope.																															
Abilene.....	1,748	7	28.14	29.96	.....	66.6	+ 2.5	92	18	77	39	9	56	38	.....	1.68	- 2.7	5	11,242	sw.	42	sw.	16	15	12	3	3.4	66.6	1892	64.5	1886
Amarillo.....	3,691	.....	.....	.....	.....	56.4	.....	89	26	70	31	9	43	39	.....	0.21	.....	3	15,191	sw.	66	sw.	4	7	16	7	4.8	52.8	.....	44.8	1884
Fort Stanton.....	6,152	9	23.89	29.90	.....	49.8	- 0.5	77	25	64	23	22	35	40	.....	0.27	- 0.4	2	7,577	w.	60	sw.	2	8	18	4	4.8	52.8	.....	44.8	1884
Southern Plateau.																															
El Paso.....	3,796	14	26.14	29.96																											

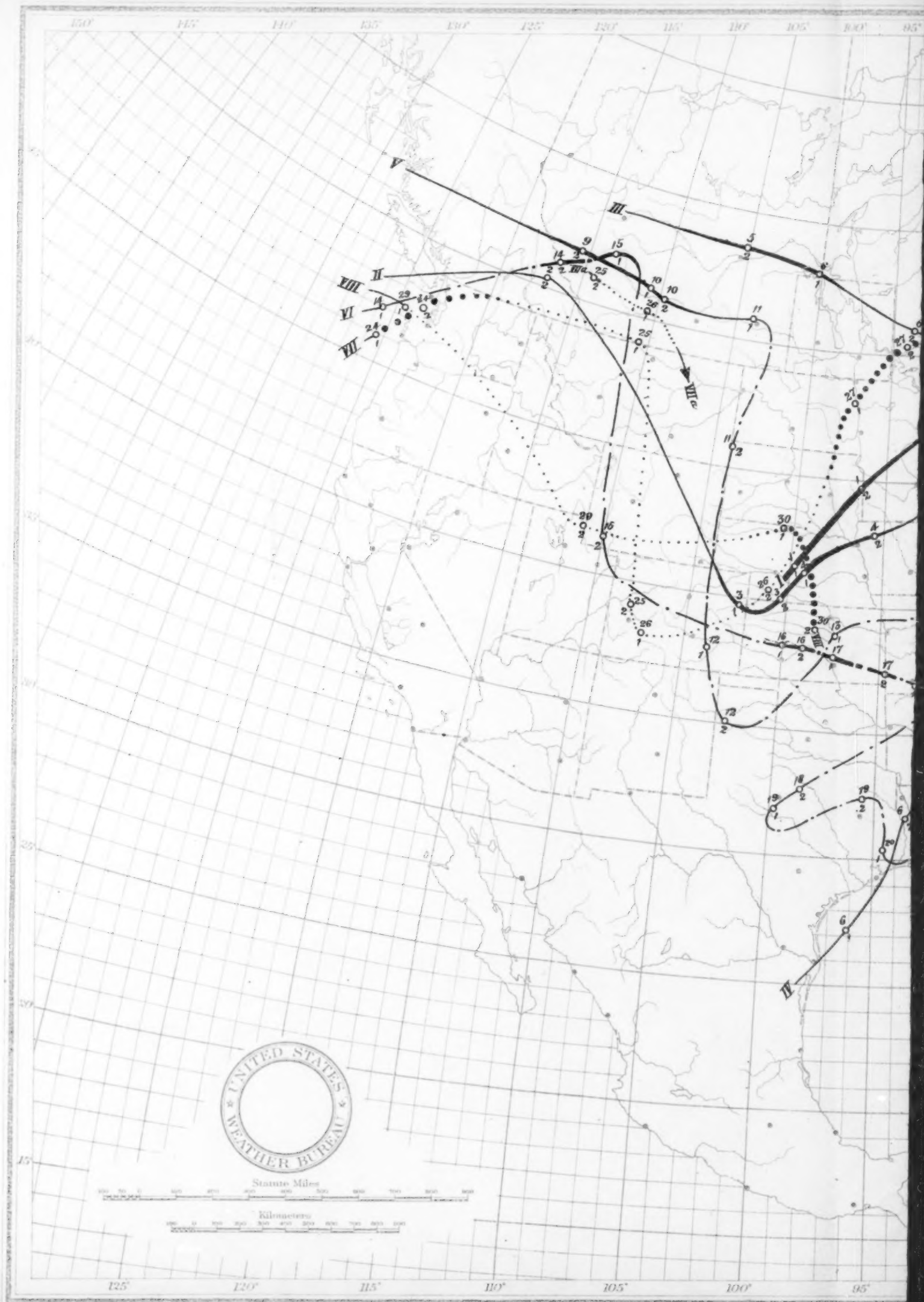


Chart I. Tracks of areas of Low Pressure. April, 1892.





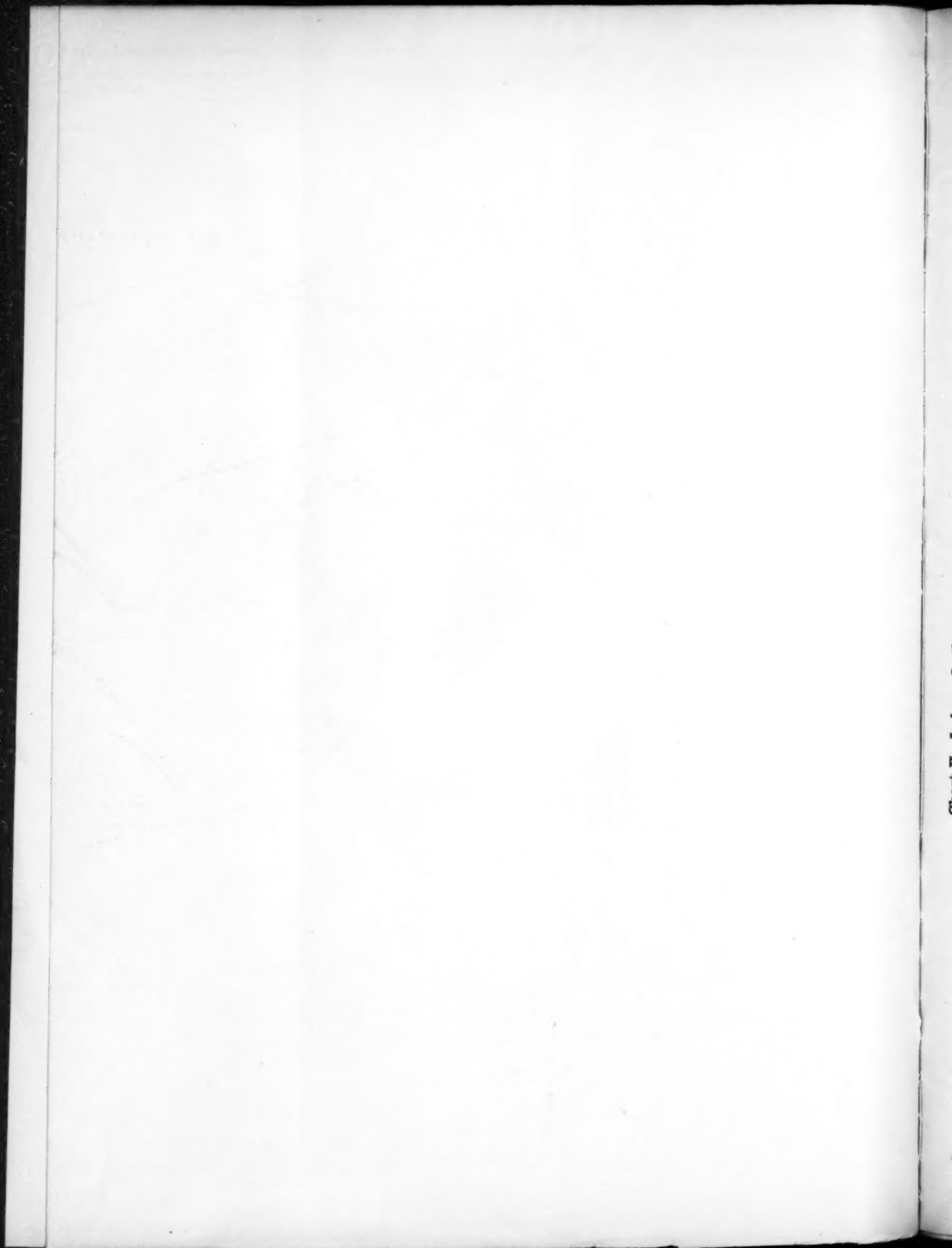


Chart II. Isobars, Isotherms, and Winds. April, 1892.

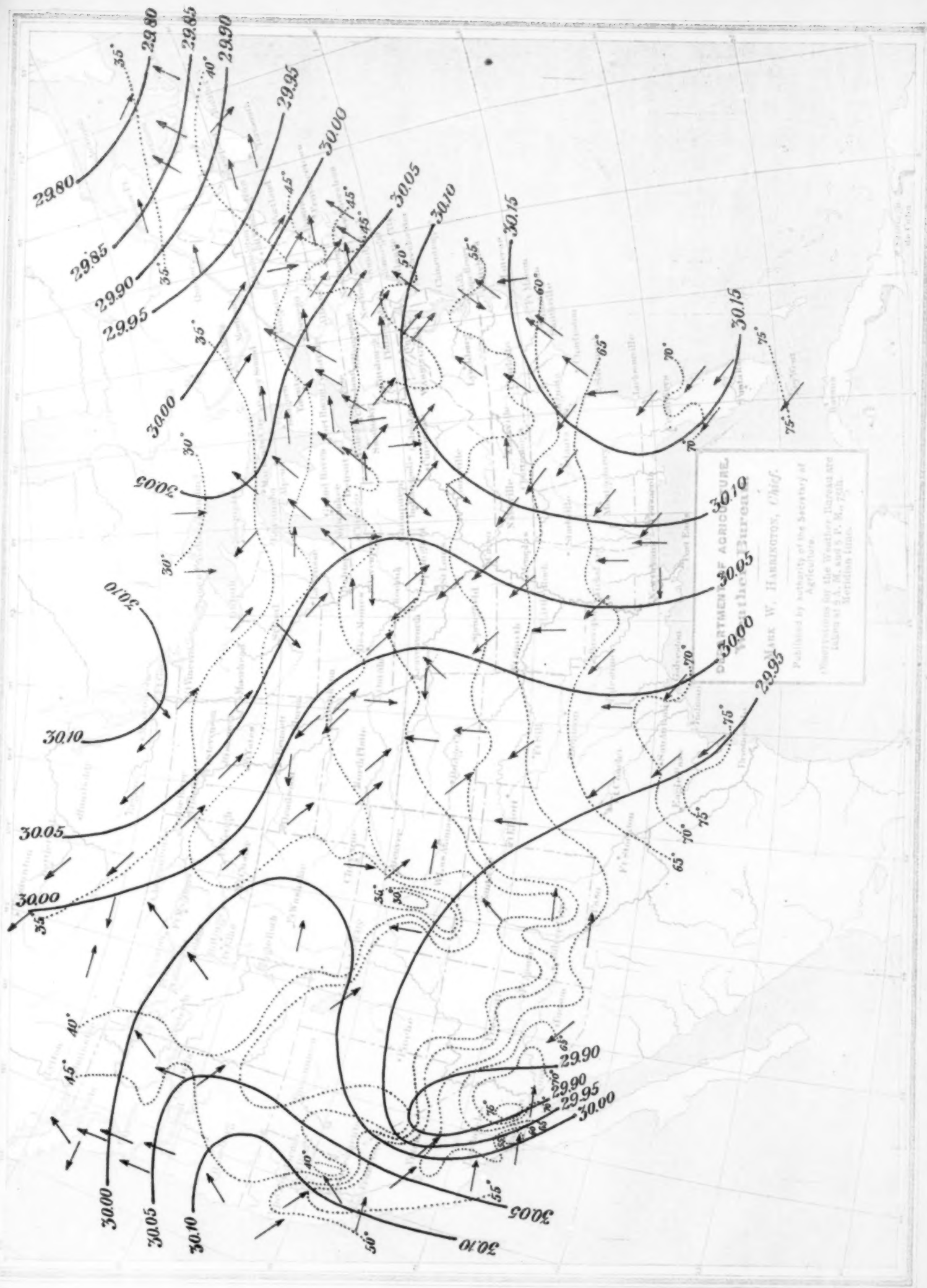


Chart III. Precipitation. April, 1892.

Form 1001 F



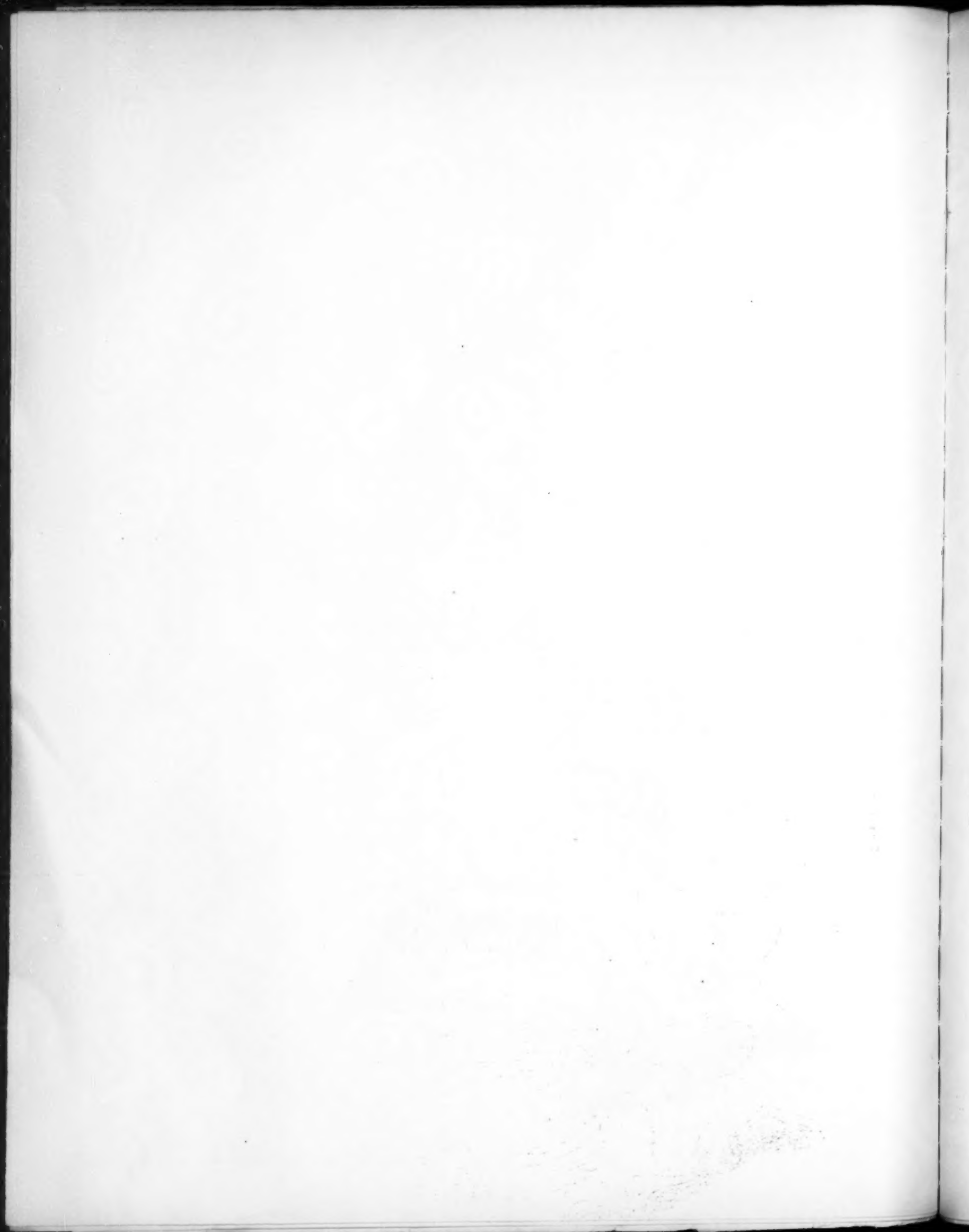
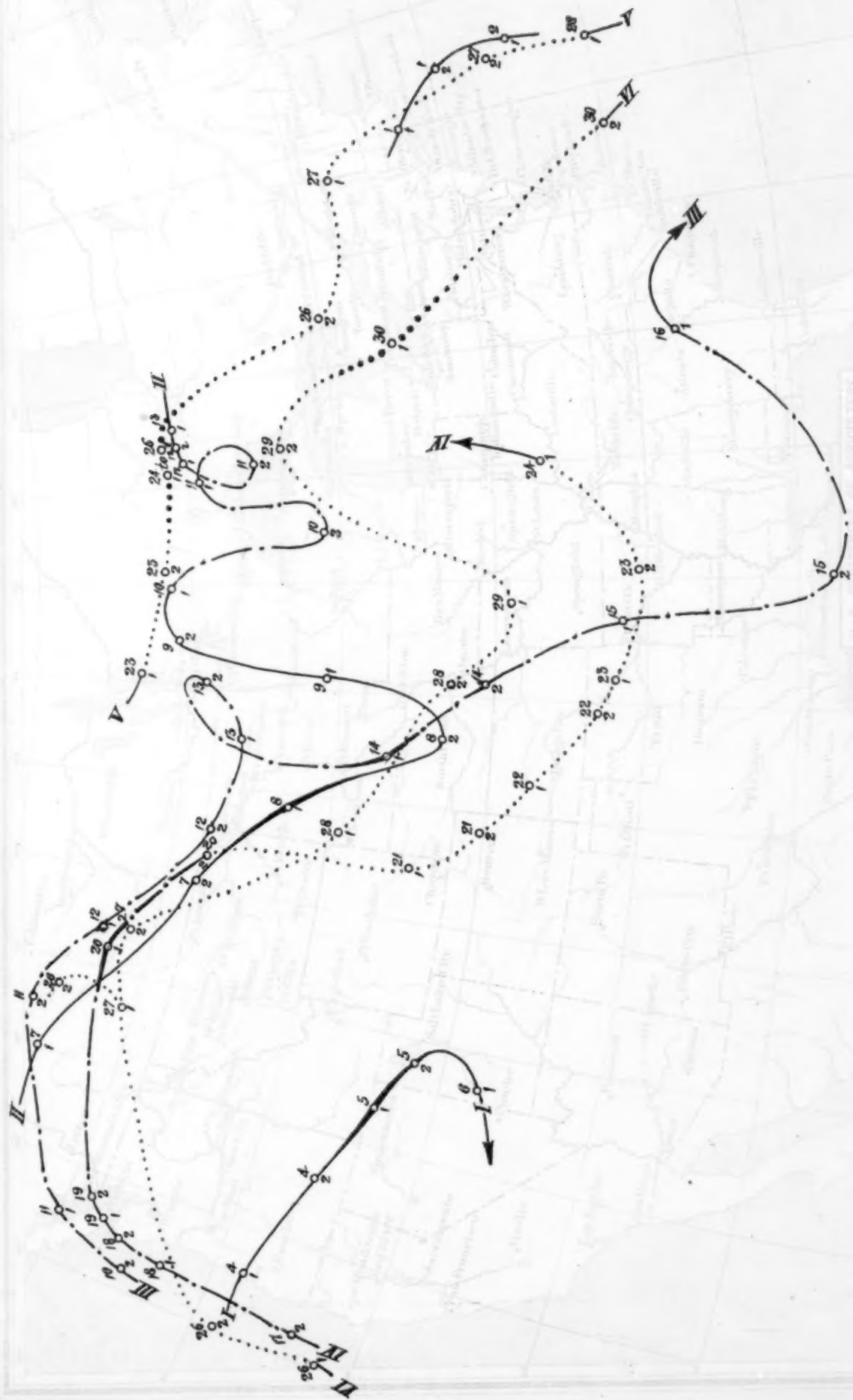


Chart IV. Tracks of areas of High Pressure. April, 1892.



NOTES.
 — Tracks of first decade of month.
 - - - Tracks of second decade of month.
 . . . Tracks from 21st to 30th, inclusive.
 The heavy portion of tracks indicates where the highest pressure was observed.

U. S. DEPARTMENT OF AGRICULTURE,
 WEATHER BUREAU,
 WASHINGTON, D. C.
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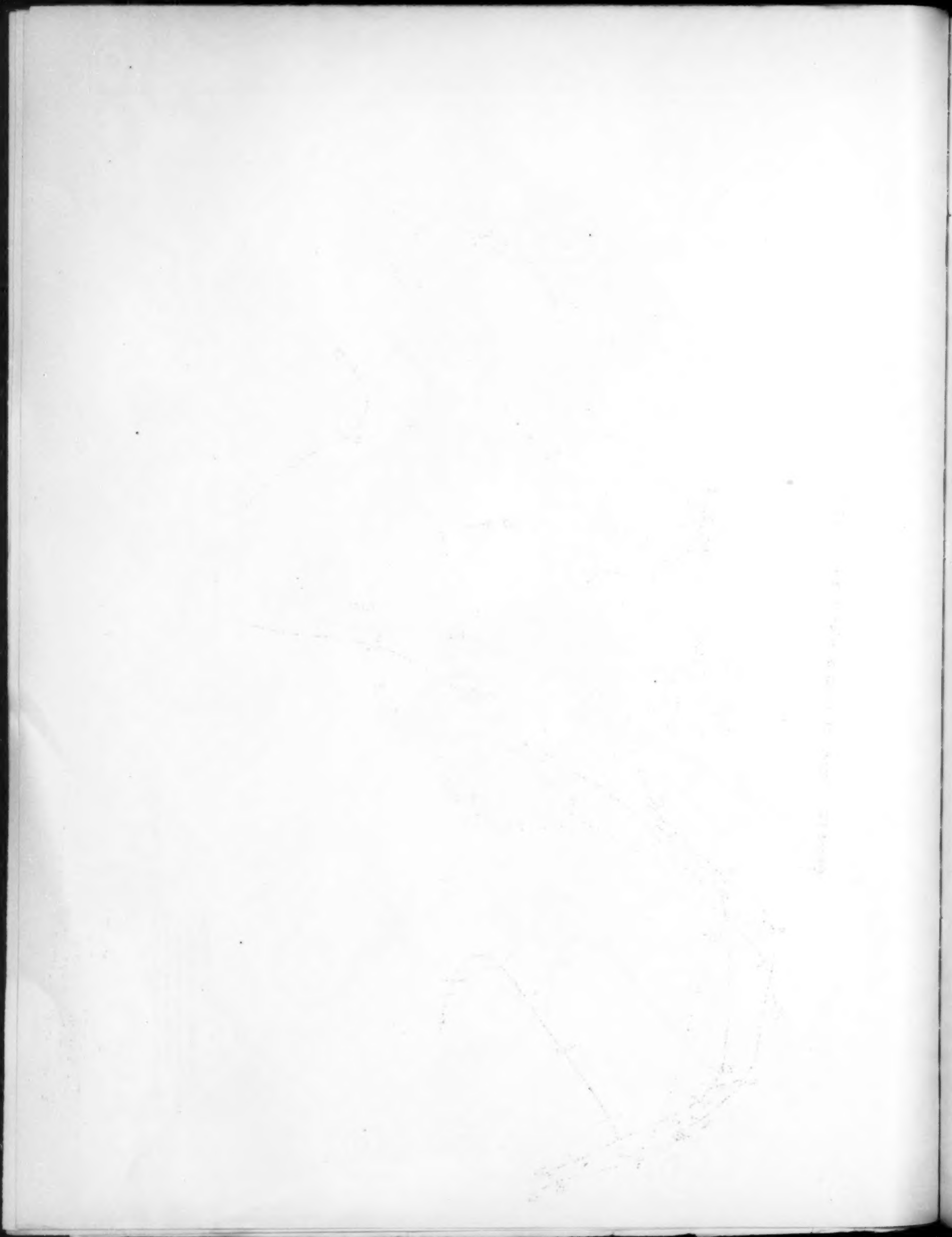
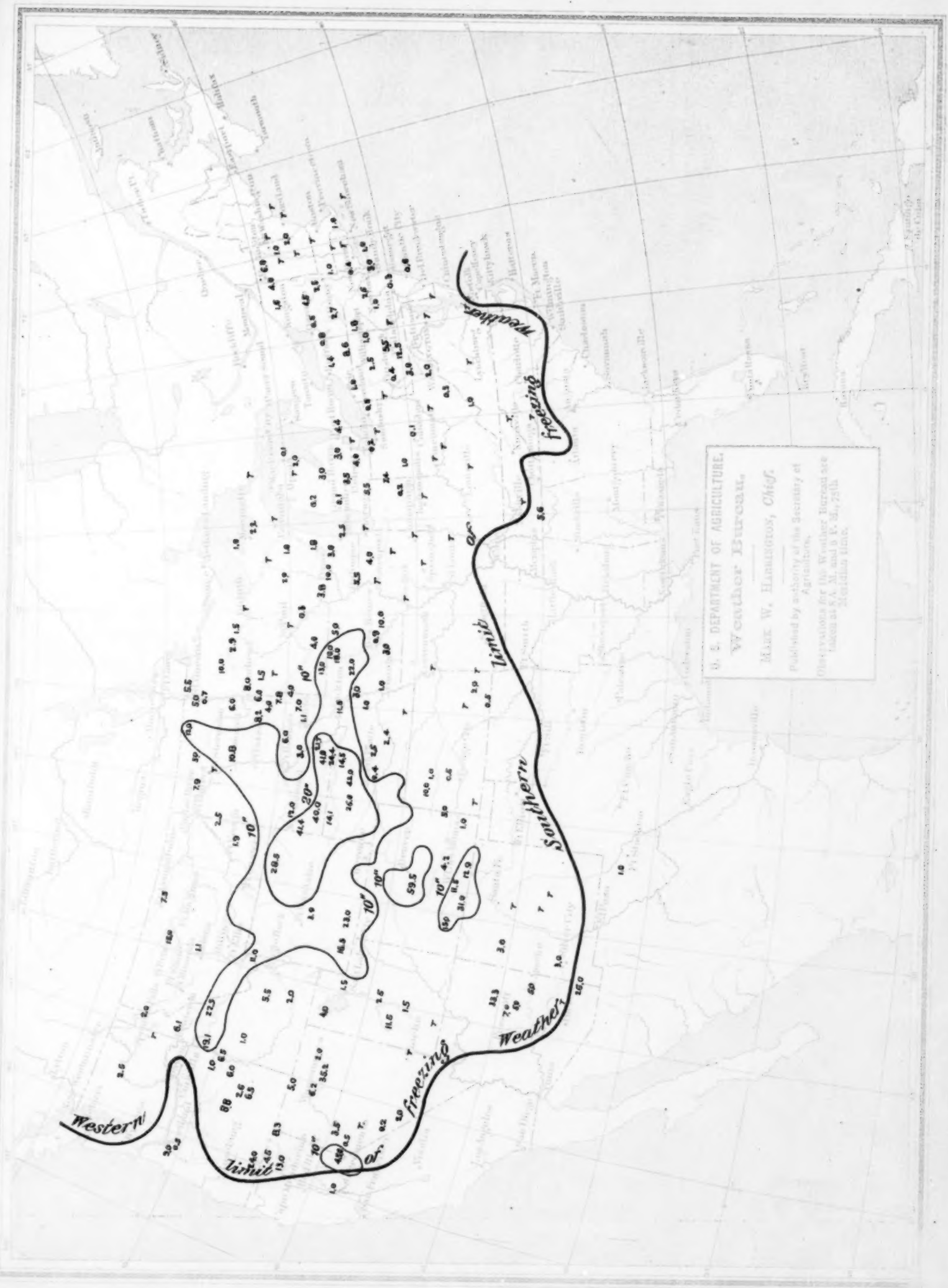


Chart V. Depth of Snowfall (inches) during April, 1892, and Limits of Freezing Weather.



U. S. DEPARTMENT OF AGRICULTURE.
 Weather Bureau,
 MARK W. HARRINGTON, Chief.
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 Agriculture.
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 Meridian time.